



SEQUENCE LISTING

<110> Renner, Wolfgang A.
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Lechner, Franziska
Sebbel, Peter
Piossek, Christine

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<140> 10/050,902

<141> 2002-01-18

<150> US 60/262,379

<151> 2001-01-19

<150> US 60/288,549

<151> 2001-05-04

<150> US 60/326,998

<151> 2001-10-05

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<151> 2001-11-07

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1 5 10 15
Thr Val Ala Gln Ala
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Cys Gly Gly Leu Thr Asp Thr Leu Gln Ala Glu Thr Asp Gln Val Glu
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35 40 45

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ctgaccgaca ccctgcaggc ggaaaccgac caggtggaag acgaaaaatc cgcgctgcaa 180
accgaaatcg cgaacctgct gaaagaaaaa gaaaagctgg agttcatcct ggcggcacac 240
ggtggttgct aagctt 256

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Ala Ala Ala Ser Gly Gly Cys Gly Gly Leu Thr Asp Thr Leu Gln Ala
5 10 15

Glu Thr Asp Gln Val Glu Asp Glu Lys Ser Ala Leu Gln Thr Glu Ile
20 25 30

Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe Ile Leu Ala Ala
35 40 45

His Gly Gly Cys
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1 5 10

gca ctg gct ggt ttc gct acc gta gcg cag gcc tgc ggt ggt ctg acc 99
Ala Leu Ala Gly Phe Ala Thr Val Ala Gln Ala Cys Gly Gly Leu Thr
15 20 25

gac acc ctg cag gcg gaa acc gac cag gtg gaa gac gaa aaa tcc gcg 147
Asp Thr Leu Gln Ala Glu Thr Asp Gln Val Glu Asp Glu Lys Ser Ala
30 35 40

ctg caa acc gaa atc gcg aac ctg ctg aaa gaa aaa gaa aag ctg gag 195
Leu Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu
45 50 55

ttc atc ctg gcg gca cac ggt ggt tgc ggt ggt tct gcg gcc gct 240
Phe Ile Leu Ala Ala His Gly Gly Cys Gly Gly Ser Ala Ala Ala
60 65 70

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1 5 10 15

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20 25 30

Thr Asp Gln Val Glu Asp Glu Lys Ser Ala Leu Gln Thr Glu Ile Ala
35 40 45

Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe Ile Leu Ala Ala His
50 55 60

Gly Gly Cys Gly Gly Ser Ala Ala Ala
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ggt ggt ctg acc gac acc ctg cag gcg gaa acc gac cag gtg gaa gac 102
Gly Gly Leu Thr Asp Thr Leu Gln Ala Glu Thr Asp Gln Val Glu Asp
      10           15           20

gaa aaa tcc gcg ctg caa acc gaa atc gcg aac ctg ctg aaa gaa aaa 150
Glu Lys Ser Ala Leu Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu Lys
      25           30           35

gaa aag ctg gag ttc atc ctg gcg gca cac ggt ggt tgc taagctt 196
Glu Lys Leu Glu Phe Ile Leu Ala Ala His Gly Gly Cys
      40           45           50
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<210> 23

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<212> PRT

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<223> Fos fusion construct

<400> 23

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      1           5           10           15

Glu Thr Asp Gln Val Glu Asp Glu Lys Ser Ala Leu Gln Thr Glu Ile
      20           25           30

Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe Ile Leu Ala Ala
      35           40           45

His Gly Gly Cys
      50
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accgaccagg tggaagacga aaaatccgcg ctgcaaaccg aaatcgcgaa cctgctgaaa 120
gaaaaagaaa agctggagtt catcctggcg gcacacgggtg gttgcggtgg ttctgcggcc 180
gctgggtgtg gggatatcaa gctt                                     204
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<223> Fos fusion construct

<400> 25

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Lys Thr Met Ala Cys Gly Gly Leu Thr Asp Thr Leu Gln Ala Glu Thr
 1           5           10           15
Asp Gln Val Glu Asp Glu Lys Ser Ala Leu Gln Thr Glu Ile Ala Asn
          20           25           30
Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe Ile Leu Ala Ala His Gly
          35           40           45
Gly Cys Gly Gly Ser Ala Ala Ala
 50           55
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<210> 26

<211> 26

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<213> Homo sapiens

<400> 26

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Met Ala Thr Gly Ser Arg Thr Ser Leu Leu Leu Ala Phe Gly Leu Leu
 1           5           10           15
Cys Leu Pro Trp Leu Gln Glu Gly Ser Ala
          20           25
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<210> 27

<211> 262

<212> DNA

<213> Artificial Sequence

<220>

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tgccctgccct ggcttcaaga gggcagcgct ggggtgtgggg cggccgcttc tgggtggttgc 120
gggtggtctga ccgacaccct gcaggcgga accgaccagg tggaagacga aaaatccgcg 180
ctgcaaaccg aaatcgcgaa cctgctgaaa gaaaaagaaa agctggagtt catcctggcg 240
gcacacggtg gttgctaagc tt                                     262
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<210> 28

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<400> 28

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Ala Ala Ala Ser Gly Gly Cys Gly Gly Leu Thr Asp Thr Leu Gln Ala
          5           10           15
Glu Thr Asp Gln Val Glu Asp Glu Lys Ser Ala Leu Gln Thr Glu Ile
          20           25           30
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Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe Ile Leu Ala Ala
35 40 45

His Gly Gly Cys
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Met Ala Thr Gly Ser Arg Thr Ser Leu Leu Leu Ala Phe Gly
1 5 10

ctg ctc tgc ctg ccc tgg ctt caa gag ggc agc gct tgc ggt ggt ctg 96
Leu Leu Cys Leu Pro Trp Leu Gln Glu Gly Ser Ala Cys Gly Gly Leu
15 20 25 30

acc gac acc ctg cag gcg gaa acc gac cag gtg gaa gac gaa aaa tcc 144
Thr Asp Thr Leu Gln Ala Glu Thr Asp Gln Val Glu Asp Glu Lys Ser
35 40 45

gcg ctg caa acc gaa atc gcg aac ctg ctg aaa gaa aaa gaa aag ctg 192
Ala Leu Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu
50 55 60

gag ttc atc ctg gcg gca cac ggt ggt tgc ggt ggt tct gcg gcc gct 240
Glu Phe Ile Leu Ala Ala His Gly Gly Cys Gly Gly Ser Ala Ala Ala
65 70 75

gggtgtggga ggcctaagct t 261

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Cys Leu Pro Trp Leu Gln Glu Gly Ser Ala Cys Gly Gly Leu Thr Asp
20 25 30

Thr Leu Gln Ala Glu Thr Asp Gln Val Glu Asp Glu Lys Ser Ala Leu
35 40 45

Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu Lys Glu Lys Leu Glu Phe
50 55 60

Ile Leu Ala Ala His Gly Gly Cys Gly Gly Ser Ala Ala Ala
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54

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27

<210> 41

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<212> DNA

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<211> 58

<212> DNA

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<223> Primer

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<223> Modified bee venom phospholipase A2

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ggt ccg aac gaa ctc ggc cgc ttt aaa cac acc gac gca tgc tgt cgc 96
Gly Pro Asn Glu Leu Gly Arg Phe Lys His Thr Asp Ala Cys Cys Arg
20 25 30

acc cag gac atg tgt ccg gac gtc atg tct gct ggt gaa tct aaa cac 144
Thr Gln Asp Met Cys Pro Asp Val Met Ser Ala Gly Glu Ser Lys His
35 40 45

ggg tta act aac acc gct tct cac acg cgt ctc agc tgc gac tgc gac 192
Gly Leu Thr Asn Thr Ala Ser His Thr Arg Leu Ser Cys Asp Cys Asp
50 55 60

gac	aaa	ttc	tac	gac	tgc	ctt	aag	aac	tcc	gcc	gat	acc	atc	tct	tct	240
Asp	Lys	Phe	Tyr	Asp	Cys	Leu	Lys	Asn	Ser	Ala	Asp	Thr	Ile	Ser	Ser	
65					70					75					80	

tac	ttc	gtt	ggt	aaa	atg	tat	ttc	aac	ctg	atc	gat	acc	aaa	tgt	tac	288
Tyr	Phe	Val	Gly	Lys	Met	Tyr	Phe	Asn	Leu	Ile	Asp	Thr	Lys	Cys	Tyr	
				85					90					95		

aaa	ctg	gaa	cac	ccg	gta	acc	ggc	tgc	ggc	gaa	cgt	acc	gaa	ggt	cgc	336
Lys	Leu	Glu	His	Pro	Val	Thr	Gly	Cys	Gly	Glu	Arg	Thr	Glu	Gly	Arg	
			100					105					110			

tgc	ctg	cac	tac	acc	gtt	gac	aaa	tct	aaa	ccg	aaa	gtt	tac	cag	tgg	384
Cys	Leu	His	Tyr	Thr	Val	Asp	Lys	Ser	Lys	Pro	Lys	Val	Tyr	Gln	Trp	
		115					120					125				

ttc	gac	ctg	cgc	aaa	tac											402
Phe	Asp	Leu	Arg	Lys	Tyr											
		130														

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			20					25					30			
Thr	Gln	Asp	Met	Cys	Pro	Asp	Val	Met	Ser	Ala	Gly	Glu	Ser	Lys	His	
		35					40					45				
Gly	Leu	Thr	Asn	Thr	Ala	Ser	His	Thr	Arg	Leu	Ser	Cys	Asp	Cys	Asp	
	50					55					60					
Asp	Lys	Phe	Tyr	Asp	Cys	Leu	Lys	Asn	Ser	Ala	Asp	Thr	Ile	Ser	Ser	
65					70					75					80	
Tyr	Phe	Val	Gly	Lys	Met	Tyr	Phe	Asn	Leu	Ile	Asp	Thr	Lys	Cys	Tyr	
				85					90					95		
Lys	Leu	Glu	His	Pro	Val	Thr	Gly	Cys	Gly	Glu	Arg	Thr	Glu	Gly	Arg	
			100					105					110			
Cys	Leu	His	Tyr	Thr	Val	Asp	Lys	Ser	Lys	Pro	Lys	Val	Tyr	Gln	Trp	
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Phe	Asp	Leu	Arg	Lys	Tyr											
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cccacaccca gcggccgctg atttgcgag gtcg 34

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ttagtatttg cgcaggtcg 19

<210> 49
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<400> 49
ccggtccat cgggtgcag 18

<210> 50
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<400> 50

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36

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<211> 35

<212> DNA

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35

<210> 52

<211> 21

<212> DNA

<213> Artificial Sequence

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<210> 53

<211> 33

<212> DNA

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<220>

<223> Primer

<400> 53

actagtctag aatgagagtg aaggagaaat atc

33

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<211> 42

<212> DNA

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<211> 51

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gtagcaccca ccaaggcaaa gctgaaagct acccagctcg agaaactggc a 51

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<212> DNA
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caaagctcct attcccactg ccagtttctc gagctgggta gctttcag 48

<210> 57
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<212> DNA
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<400> 57
ttcgggtgcta gcgggtggctg cggtggtctg accgac 36

<210> 58
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<400> 58
gatgctgggc ccttaaccgc aaccaccgtg tgccgcc 37

<210> 59
<211> 46
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<220>
<223> JUN amino acid sequence

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Cys Gly Gly Arg Ile Ala Arg Leu Glu Glu Lys Val Lys Thr Leu Lys
1 5 10 15

Ala Gln Asn Ser Glu Leu Ala Ser Thr Ala Asn Met Leu Arg Glu Gln
20 25 30

Val Ala Gln Leu Lys Gln Lys Val Met Asn His Val Gly Cys

35

40

45

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<220>
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<400> 60
Cys Gly Gly Leu Thr Asp Thr Leu Gln Ala Glu Thr Asp Gln Val Glu
1 5 10 15
Asp Glu Lys Ser Ala Leu Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu
20 25 30
Lys Glu Lys Leu Glu Phe Ile Leu Ala Ala His Gly Gly Cys
35 40 45

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ccggaattca tgtgcggtgg tcggatcgcc cgg 33

<210> 62
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<220>
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<400> 62
gtcgtaccc gcggctccgc aaccaacgtg gttcatgac 39

<210> 63
<211> 50
<212> DNA
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<220>
<223> Primer

<400> 63
gttggttgcg gagccgcggg tagcgacatt gacccttata aagaatttgg 50

<210> 64
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cgcggtcccaa gcttctacgg aagcgttgat aggatagg 38

<210> 65
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<400> 65
ctagcgcgcg gttgcggtgg tcggatcgcc cgg 33

<210> 66
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<400> 67
ccggaattca tggacattga cccttataaa g 31

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ccgaccaccg caaccgcgcg ctagcggaag cggtgatagg atagg 45

<210> 69
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<400> 69

ctaattggatc cgggtgggggc tgcggtgggc ggatcgcccg gctcgag

47

<210> 70

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<223> Primer

<400> 70

gtcgctaccc gcggctccgc aaccaacgtg gtcatgac

39

<210> 71

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 71

ccggaattca tggacattga cccttataaa g

31

<210> 72

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 72

ccgaccaccg cagccccac cggatccatt agtaccacc caggtagc

48

<210> 73

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 73

gttggttgcg gagccgctgg tagcgacctg gtagtcagtt atgtc

45

<210> 74

<211> 38

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 74

cgcggtcccaa gcttctacgg aagcggtgat aggatagg

38

<210> 75

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 75

ctagccgcgg gttgcggtgg tcggatcgcc cgg

33

<210> 76

<211> 38

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 76

cgcggtcccaa gcttttagca accaacgtgg ttcattgac

38

<210> 77

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 77

ccggaattca tggccacact tttaaggagc

30

<210> 78

<211> 38

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 78

cgcggtcccaa gcttttagca accaacgtgg ttcattgac

38

<210> 79

<211> 31

<212> DNA

<213> Artificial Sequence

<220>
<223> Primer

<400> 79
ccggaattca tggacattga cccttataaa g 31

<210> 80
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 80
cctagagcca cctttgccac catcttctaa attagtagcc acccaggtag c 51

<210> 81
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 81
gaagatggtg gcaaagggtg ctctagggac ctagtagtca gttatgtc 48

<210> 82
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 82
cgcggtcccaa gcttctaaac aacagtagtc tccggaag 38

<210> 83
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 83
gccgaattcc tagcagctag caccgaattt atctaa 36

<210> 84
<211> 33

<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 84
ggttaagtgc acatgagagt gaaggagaaa tat 33

<210> 85
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 85
taaccgaatt caggaggtaa aaagatatgg 30

<210> 86
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 86
gaagtaaagc ttttaaccac cgcaaccacc agaag 35

<210> 87
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 87
tcgaatgggc cctcatcttc gtgtgctagt cag 33

<210> 88
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Fos fusion construct

<400> 88
Glu Phe Arg Arg
1

<210> 89
<211> 183

<212> PRT

<213> Hepatitis B virus

<400> 89

Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15

Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30

Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45

Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
50 55 60

Leu Met Thr Leu Ala Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Ile
65 70 75 80

Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
85 90 95

Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
100 105 110

Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125

Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140

Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
145 150 155 160

Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Ser
165 170 175

Gln Ser Arg Gly Ser Gln Cys
180

<210> 90

<211> 183

<212> PRT

<213> Hepatitis B virus

<400> 90

Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15

Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30

Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45

Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
50 55 60

Leu Met Thr Leu Ala Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Thr
65 70 75 80

Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
85 90 95

Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
100 105 110

Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125

Pro Pro Ala Tyr Arg Pro Thr Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140

Glu Thr Cys Val Ile Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
145 150 155 160

Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Ser
165 170 175

Gln Ser Arg Gly Ser Gln Cys
180

<210> 91

<211> 212

<212> PRT

<213> Hepatitis B virus

<400> 91

Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15

Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60

Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80

His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
85 90 95

Leu Ala Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Ile Ser Arg Asp
100 105 110

Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125

Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175

Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205

Glu Ser Gln Cys
210

<210> 92
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 92
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15

Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Asn Ala Ser
50 55 60

Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80

His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
85 90 95

Leu Ala Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Ile Ser Arg Asp
100 105 110

Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125

Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175

Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205

Glu Ser Gln Cys
210

<210> 93

<211> 183
<212> PRT
<213> Hepatitis B virus

<400> 93
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15
Ser Phe Leu Pro Thr Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
50 55 60
Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala
65 70 75 80
Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
85 90 95
Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
100 105 110
Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125
Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140
Glu Thr Cys Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
145 150 155 160
Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
165 170 175
Gln Ser Arg Glu Ser Gln Cys
180

<210> 94
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 94
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60
Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His

65		70		75		80
His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp Leu Met Thr						
	85			90		95
Leu Ala Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Val Ser Arg Asp						
	100			105		110
Leu Val Val Ser Tyr Val Asn Thr Asn Val Gly Leu Lys Phe Arg Gln						
	115			120		125
Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val						
	130			135		140
Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala						
	145			150		155
Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr						
	165			170		175
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro						
	180			185		190
Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg						
	195			200		205
Glu Ser Gln Cys						
	210					
<210> 95						
<211> 212						
<212> PRT						
<213> Hepatitis B virus						
<400> 95						
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr						
	1		5		10	15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Asp Met Asp Ile						
	20			25		30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu						
	35			40		45
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser						
	50			55		60
Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His						
	65		70		75	80
His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp Leu Met Thr						
	85			90		95
Leu Ala Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Val Ser Arg Asp						
	100			105		110
Leu Val Val Ser Tyr Val Asn Thr Asn Val Gly Leu Lys Phe Arg Gln						
	115			120		125
Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val						

130 135 140
Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160
Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190
Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205
Glu Ser Gln Cys
210

<210> 96
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 96
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60
Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro Gln
65 70 75 80
His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
85 90 95
Leu Ala Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Ile Ser Arg Asp
100 105 110
Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125
Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140
Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160
Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190
Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg

195	200	205
Glu Ser Gln Cys		
210		
<210> 97		
<211> 212		
<212> PRT		
<213> Hepatitis B virus		
<400> 97		
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr		
1 5 10 15		
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile		
20 25 30		
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu		
35 40 45		
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser		
50 55 60		
Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His		
65 70 75 80		
His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr		
85 90 95		
Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp		
100 105 110		
Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln		
115 120 125		
Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val		
130 135 140		
Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala		
145 150 155 160		
Tyr Lys Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr		
165 170 175		
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro		
180 185 190		
Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg		
195 200 205		
Gly Ser Gln Cys		
210		

<210> 98
 <211> 183
 <212> PRT
 <213> Hepatitis B virus
 <400> 98

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Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
 1           5           10           15
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
          20           25           30
Thr Ala Ser Ala Leu Phe Arg Asp Ala Leu Glu Ser Pro Glu His Cys
      35           40           45
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
      50           55           60
Leu Met Thr Leu Ala Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Ala
 65           70           75           80
Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
          85           90           95
Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
      100           105           110
Asp Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
      115           120           125
Pro Pro Ala Tyr Arg Pro Ser Asn Ala Pro Ile Leu Ser Thr Leu Pro
      130           135           140
Glu Thr Cys Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
145           150           155           160
Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
          165           170           175
Gln Ser Arg Glu Ser Gln Cys
      180

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<210> 99
 <211> 183
 <212> PRT
 <213> Hepatitis B virus

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<400> 99
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
 1           5           10           15
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
          20           25           30
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
      35           40           45
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
      50           55           60
Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala
 65           70           75           80
Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
          85           90           95

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Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
 100 105 110
 Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
 115 120 125
 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
 130 135 140
 Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
 145 150 155 160
 Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
 165 170 175
 Gln Ser Arg Glu Ser Gln Cys
 180

<210> 100
 <211> 212
 <212> PRT
 <213> Hepatitis B virus

<400> 100
 Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
 1 5 10 15
 Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
 20 25 30
 Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
 35 40 45
 Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
 50 55 60
 Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
 65 70 75 80
 His Thr Ala Leu Arg His Ala Ile Leu Cys Trp Gly Asp Leu Arg Thr
 85 90 95
 Leu Ala Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Ile Ser Arg Asp
 100 105 110
 Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
 115 120 125
 Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
 130 135 140
 Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
 145 150 155 160
 Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
 165 170 175
 Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
 180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205

Glu Ser Gln Cys
210

<210> 101
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 101
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15

Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Asp Met Asp Ile
20 25 30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60

Ala Leu Phe Arg Asp Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80

His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
85 90 95

Leu Ala Thr Trp Val Gly Ala Asn Leu Glu Asp Pro Ala Ser Arg Asp
100 105 110

Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125

Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Gln Ala
145 150 155 160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Cys
165 170 175

Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205

Glu Ser Gln Cys
210

<210> 102
<211> 183
<212> PRT
<213> Artificial Sequence

<220>

<223> synthetic human Hepatitis B construct

<400> 102

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Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
 1           5           10           15

Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
          20           25           30

Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
      35           40           45

Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
      50           55           60

Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala
      65           70           75           80

Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
          85           90           95

Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
      100           105           110

Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
      115           120           125

Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
      130           135           140

Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
      145           150           155           160

Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
          165           170           175

Gln Ser Arg Glu Ser Gln Cys
      180

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<210> 103

<211> 212

<212> PRT

<213> Hepatitis B virus

<400> 103

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Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
 1           5           10           15

Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
          20           25           30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
      35           40           45

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
      50           55           60

Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
      65           70           75           80

```

His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp Leu Met Ser
85 90 95

Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ile Ser Arg Asp
100 105 110

Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125

Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175

Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205

Glu Ser Gln Cys
210

<210> 104

<211> 183

<212> PRT

<213> Hepatitis B virus

<400> 104

Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15

Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30

Thr Ala Ser Ala Leu Tyr Arg Asp Ala Leu Glu Ser Pro Glu His Cys
35 40 45

Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
50 55 60

Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala
65 70 75 80

Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
85 90 95

Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
100 105 110

Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125

Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140

Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
145 150 155 160

Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
165 170 175

Gln Ser Arg Glu Ser Gln Cys
180

<210> 105

<211> 183

<212> PRT

<213> Hepatitis B virus

<400> 105

Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15

Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30

Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45

Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp
50 55 60

Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala
65 70 75 80

Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
85 90 95

Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
100 105 110

Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125

Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140

Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
145 150 155 160

Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
165 170 175

Gln Ser Arg Glu Ser Gln Cys
180

<210> 106

<211> 183

<212> PRT

<213> Hepatitis B virus

<400> 106

Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu

1	5	10	15
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp	20	25	30
Thr Ala Ser Ala Leu Tyr Arg Asp Ala Leu Glu Ser Pro Glu His Cys	35	40	45
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu	50	55	60
Leu Met Thr Leu Ala Thr Trp Val Gly Ala Asn Leu Glu Asp Pro Ala	65	70	75
Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys	85	90	95
Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg	100	105	110
Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr	115	120	125
Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro	130	135	140
Glu Thr Thr Val Val Arg Arg Arg Gly Arg Thr Pro Arg Arg Arg Thr	145	150	155
Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser	165	170	175
Gln Ser Arg Glu Ser Gln Cys	180		

<210> 107
 <211> 212
 <212> PRT
 <213> Hepatitis B virus

<400> 107
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60
Ala Leu Tyr Arg Asp Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80
His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
85 90 95
Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp

100 105 110
Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125
Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140
Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160
Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190
Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205
Glu Ser Gln Cys
210

<210> 108
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 108
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60
Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80
His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp Leu Met Thr
85 90 95
Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp
100 105 110
Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125
Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140
Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160
Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr

	165	170	175
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro	180	185	190
Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg	195	200	205
Glu Ser Gln Cys	210		
<210> 109			
<211> 212			
<212> PRT			
<213> Hepatitis B virus			
<400> 109			
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Thr Cys Pro Thr	1	5	10
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile	20	25	30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu	35	40	45
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser	50	55	60
Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His	65	70	75
His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr	85	90	95
Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp	100	105	110
Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln	115	120	125
Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val	130	135	140
Ile Glu Tyr Leu Val Ala Phe Gly Val Trp Ile Arg Thr Pro Pro Ala	145	150	155
Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr	165	170	175
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro	180	185	190
Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg	195	200	205
Glu Ser Gln Cys	210		

<210> 110
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 110
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60
Ala Leu Tyr Arg Glu Ala Phe Glu Cys Ser Glu His Cys Ser Pro His
65 70 75 80
His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
85 90 95
Leu Ala Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Ile Ser Arg Asp
100 105 110
Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125
Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140
Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160
Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190
Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205
Glu Ser Gln Cys
210

<210> 111
<211> 212
<212> PRT
<213> Hepatitis B virus

<220>
<221> UNSURE
<222> 28
<223> Xaa may be any amino acid.

<400> 111
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr

1	5	10	15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Xaa Asp Met Asp Ile	20	25	30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu	35	40	45
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser	50	55	60
Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His	65	70	75
His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp Leu Ile Thr	85	90	95
Leu Ser Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Thr Ser Arg Asp	100	105	110
Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln	115	120	125
Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val	130	135	140
Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala	145	150	155
Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr	165	170	175
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro	180	185	190
Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Thr Gln Ser Arg	195	200	205
Glu Ser Gln Cys	210		

<210> 112
 <211> 212
 <212> PRT
 <213> Hepatitis B virus

<400> 112
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Asn Ala Ser
50 55 60
Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His

65					70					75				80	
His	Thr	Ala	Leu	Arg	Gln	Ala	Ile	Leu	Cys	Trp	Gly	Glu	Leu	Met	Thr
				85					90					95	
Leu	Ala	Thr	Trp	Val	Gly	Val	Asn	Leu	Glu	Asp	Pro	Ala	Ser	Arg	Asp
			100					105					110		
Leu	Val	Val	Ser	Tyr	Val	Asn	Thr	Asn	Met	Gly	Leu	Lys	Phe	Arg	Gln
		115					120					125			
Leu	Leu	Trp	Phe	His	Ile	Ser	Cys	Leu	Thr	Phe	Gly	Arg	Glu	Thr	Val
	130					135					140				
Ile	Glu	Tyr	Leu	Val	Ser	Phe	Gly	Val	Trp	Ile	Arg	Thr	Pro	Pro	Ala
145					150					155					160
Tyr	Arg	Pro	Pro	Asn	Ala	Pro	Ile	Leu	Ser	Thr	Leu	Pro	Glu	Thr	Thr
				165					170					175	
Val	Val	Arg	Arg	Arg	Gly	Arg	Ser	Pro	Arg	Arg	Arg	Thr	Pro	Ser	Pro
			180					185					190		
Arg	Arg	Arg	Arg	Ser	Gln	Ser	Pro	Arg	Arg	Arg	Arg	Ser	Gln	Ser	Arg
		195					200					205			
Glu	Ser	Gln	Cys												
	210														

<210> 113
 <211> 212
 <212> PRT
 <213> Hepatitis B virus

<400> 113
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60
Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80
His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
85 90 95
Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp
100 105 110
Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125

Leu Leu Trp Phe His Ile Cys Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140
Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160
Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190
Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205
Glu Ser Gln Cys
210

<210> 114
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 114
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60
Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80
His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
85 90 95
Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp
100 105 110
Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125
Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140
Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160
Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205

Glu Pro Gln Cys
210

<210> 115
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 115
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15

Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Ser Thr Ala Ser
50 55 60

Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80

His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
85 90 95

Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp
100 105 110

Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125

Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175

Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205

Glu Ser Gln Cys
210

<210> 116
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 116

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Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
 1              5              10              15

Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
      20              25              30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
      35              40              45

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
      50              55              60

Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
      65              70              75              80

His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
      85              90              95

Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp
      100              105              110

Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
      115              120              125

Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
      130              135              140

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
      145              150              155              160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Leu Thr Leu Pro Glu Thr Thr
      165              170              175

Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
      180              185              190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
      195              200              205

Glu Ser Gln Cys
      210

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<210> 117

<211> 212

<212> PRT

<213> Hepatitis B virus

<400> 117

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Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
 1              5              10              15

Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
      20              25              30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
      35              40              45

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser

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50					55					60					
Ala	Leu	Tyr	Arg	Glu	Ala	Leu	Glu	Ser	Pro	Glu	His	Cys	Ser	Pro	His
65					70					75					80
His	Thr	Ala	Leu	Arg	Gln	Ala	Ile	Leu	Cys	Trp	Gly	Asp	Leu	Met	Thr
				85					90					95	
Leu	Ala	Thr	Trp	Val	Gly	Val	Asn	Leu	Glu	Asp	Pro	Ala	Ser	Arg	Asp
			100					105					110		
Leu	Val	Val	Ser	Tyr	Val	Asn	Thr	Asn	Met	Gly	Leu	Lys	Phe	Lys	Gln
		115					120					125			
Leu	Leu	Trp	Phe	His	Ile	Ser	Cys	Leu	Thr	Phe	Gly	Arg	Glu	Thr	Val
	130					135					140				
Ile	Glu	Tyr	Leu	Val	Ser	Phe	Gly	Val	Trp	Ile	Arg	Thr	Pro	Pro	Ala
145						150					155				160
Tyr	Arg	Pro	Pro	Asn	Ala	Pro	Ile	Leu	Ser	Thr	Leu	Pro	Glu	Thr	Thr
				165					170					175	
Val	Val	Arg	Arg	Arg	Gly	Arg	Ser	Pro	Arg	Arg	Arg	Thr	Pro	Ser	Pro
			180					185					190		
Arg	Arg	Arg	Arg	Ser	Gln	Ser	Pro	Arg	Arg	Arg	Arg	Ser	Gln	Ser	Arg
		195					200					205			
Glu	Ser	Gln	Cys												
	210														
<210> 118															
<211> 212															
<212> PRT															
<213> Hepatitis B virus															
<400> 118															
Met	Gln	Leu	Phe	His	Leu	Cys	Leu	Ile	Ile	Ser	Cys	Ser	Cys	Pro	Thr
1				5					10					15	
Val	Gln	Ala	Ser	Lys	Leu	Cys	Leu	Gly	Trp	Leu	Trp	Gly	Met	Asp	Ile
			20					25					30		
Asp	Pro	Tyr	Lys	Glu	Phe	Gly	Ala	Thr	Val	Glu	Leu	Leu	Ser	Phe	Leu
		35					40					45			
Pro	Ser	Asp	Phe	Phe	Pro	Ser	Val	Arg	Asp	Leu	Leu	Asp	Thr	Ala	Ala
	50					55					60				
Ala	Leu	Tyr	Arg	Asp	Ala	Leu	Glu	Ser	Pro	Glu	His	Cys	Ser	Pro	His
65					70					75					80
His	Thr	Ala	Leu	Arg	Gln	Ala	Ile	Leu	Cys	Trp	Gly	Glu	Leu	Met	Thr
				85					90					95	
Leu	Ala	Thr	Trp	Val	Gly	Thr	Asn	Leu	Glu	Asp	Pro	Ala	Ser	Arg	Asp
			100					105					110		
Leu	Val	Val	Ser	Tyr	Val	Asn	Thr	Asn	Met	Gly	Leu	Lys	Phe	Arg	Gln

115	120	125
Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val		
130	135	140
Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala		
145	150	155
Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr		
	165	170
		175
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro		
	180	185
		190
Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg		
	195	200
		205
Glu Ser Gln Cys		
210		

<210> 119
 <211> 183
 <212> PRT
 <213> Hepatitis B virus

<400> 119
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Ser Met Glu Leu Leu
1 5 10 15
Ser Phe Leu Pro Ser Asp Phe Tyr Pro Ser Val Arg Asp Leu Leu Asp
20 25 30
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45
Thr Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
50 55 60
Leu Met Thr Leu Ala Thr Trp Val Gly Gly Asn Leu Gln Asp Pro Thr
65 70 75 80
Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
85 90 95
Phe Arg Gln Leu Leu Trp Phe His Val Ser Cys Leu Thr Phe Gly Arg
100 105 110
Glu Thr Val Val Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125
Pro Gln Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140
Glu Thr Cys Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
145 150 155 160
Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
165 170 175
Gln Ser Arg Glu Ser Gln Cys

180

<210> 120
<211> 183
<212> PRT
<213> Hepatitis B virus

<400> 120
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45
Ser Pro His His Thr Ala Leu Arg His Val Phe Leu Cys Trp Gly Asp
50 55 60
Leu Met Thr Leu Ala Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Thr
65 70 75 80
Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
85 90 95
Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
100 105 110
Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125
Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140
Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
145 150 155 160
Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
165 170 175
Gln Ser Arg Glu Ser Gln Cys
180

<210> 121
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 121
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60

Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80

His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp Leu Thr Thr
85 90 95

Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp
100 105 110

Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125

Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175

Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205

Glu Ser Gln Cys
210

<210> 122

<211> 212

<212> PRT

<213> Hepatitis B virus

<400> 122

Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15

Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60

Ala Leu Tyr Arg Asp Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80

His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
85 90 95

Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp
100 105 110

Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125

Leu Leu Trp Phe His Ile Ser Cys Leu Ile Phe Gly Arg Glu Thr Val
130 135 140

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175

Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205

Glu Ser Gln Cys
210

<210> 123
<211> 183
<212> PRT
<213> Hepatitis B virus

<400> 123
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15

Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30

Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45

Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp
50 55 60

Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Val
65 70 75 80

Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Val Gly Leu Lys
85 90 95

Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
100 105 110

Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125

Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140

Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
145 150 155 160

Pro Ser Pro Ala Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
165 170 175

Gln Ser Arg Glu Ser Gln Cys
180

<210> 124
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 124
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60
Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80
His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp Leu Met Asn
85 90 95
Leu Ala Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Val Ser Arg Asp
100 105 110
Leu Val Val Gly Tyr Val Asn Thr Thr Val Gly Leu Lys Phe Arg Gln
115 120 125
Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140
Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160
Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190
Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205
Glu Ser Gln Cys
210

<210> 125
<211> 183
<212> PRT
<213> Hepatitis B virus

<400> 125
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15

Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30

Thr Ala Ser Ala Leu Tyr Arg Asp Ala Leu Glu Ser Pro Glu His Cys
35 40 45

Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp
50 55 60

Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala
65 70 75 80

Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
85 90 95

Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
100 105 110

Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125

Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140

Glu Thr Thr Val Val Arg Arg Arg Gly Arg Thr Pro Arg Arg Arg Thr
145 150 155 160

Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
165 170 175

Gln Ser Arg Glu Ser Gln Cys
180

<210> 126

<211> 212

<212> PRT

<213> Hepatitis B virus

<400> 126

Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15

Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45

Pro Ser Asp Phe Phe Pro Ser Val Arg Ala Leu Leu Asp Thr Ala Ser
50 55 60

Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80

His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
85 90 95

Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp
100 105 110

Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125

Ile Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175

Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205

Glu Ser Gln Cys
210

<210> 127
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 127
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15

Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60

Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80

His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp Leu Met Thr
85 90 95

Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Thr Arg Asp
100 105 110

Leu Val Val Ser Tyr Val Asn Thr Asn Val Gly Leu Lys Phe Arg Gln
115 120 125

Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175

Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205

Glu Ser Gln Cys
210

<210> 128
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 128
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15

Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
50 55 60

Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80

His Thr Ala Leu Arg Gln Arg Ile Leu Cys Trp Gly Glu Leu Met Thr
85 90 95

Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp
100 105 110

Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
115 120 125

Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175

Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Thr Arg Ser Gln Ser Arg
195 200 205

Glu Ser Gln Cys
210

<210> 129
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 129
Met Gln Leu Phe His Leu Cys Leu Val Ile Ser Cys Ser Cys Pro Thr
1 5 10 15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30
Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
35 40 45
Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ala
50 55 60
Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
65 70 75 80
His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
85 90 95
Leu Ala Thr Trp Val Gly Asn Asn Leu Glu Asp Pro Ala Ser Arg Asp
100 105 110
Leu Val Val Asn Tyr Val Asn Thr Asn Met Gly Leu Lys Ile Arg Gln
115 120 125
Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
130 135 140
Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
145 150 155 160
Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
165 170 175
Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
180 185 190
Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
195 200 205
Glu Ser Gln Cys
210

<210> 130
<211> 212
<212> PRT
<213> Hepatitis B virus

<400> 130
Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
1 5 10 15
Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
20 25 30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
 35 40 45
 Pro Ser Ala Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
 50 55 60
 Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
 65 70 75 80
 His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp Leu Met Thr
 85 90 95
 Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp
 100 105 110
 Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
 115 120 125
 Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
 130 135 140
 Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
 145 150 155 160
 Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
 165 170 175
 Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
 180 185 190
 Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
 195 200 205
 Glu Ser Gln Cys
 210

<210> 131
 <211> 183
 <212> PRT
 <213> Hepatitis B virus

<400> 131
 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
 1 5 10 15
 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
 20 25 30
 Thr Ala Ala Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
 35 40 45
 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
 50 55 60
 Leu Met Thr Leu Ala Thr Trp Val Gly Asn Asn Leu Glu Asp Pro Ala
 65 70 75 80
 Ser Arg Asp Leu Val Val Asn Tyr Val Asn Thr Asn Met Gly Leu Lys
 85 90 95

Ile Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
100 105 110

Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125

Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140

Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
145 150 155 160

Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
165 170 175

Gln Ser Arg Glu Ser Gln Cys
180

<210> 132
<211> 183
<212> PRT
<213> Hepatitis B virus

<400> 132
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15

Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30

Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45

Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
50 55 60

Leu Met Thr Leu Ala Thr Trp Val Gly Gly Asn Leu Glu Asp Pro Ile
65 70 75 80

Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
85 90 95

Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
100 105 110

Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125

Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140

Glu Thr Cys Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
145 150 155 160

Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
165 170 175

Gln Ser Arg Gly Ser Gln Cys
180

<210> 133
<211> 3221
<212> DNA
<213> Hepatitis B virus

<220>
<221> CDS
<222> (1901)..(2458)

<400> 133
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aatctccgcg aggactgggg accctgtgac gaacatggag aacatcacat caggattcct 180
aggacccctg ctctgtttac aggcgggggt tttattgttg acaagaatcc tcacaatacc 240
gcagagtcta gactcgtggt ggacttctct caattttata gggggatcac ccgtgtgtct 300
tggccaaaat tcgcagtccc caacctccaa tctctacca acctcctgtc ctccaatttg 360
tcttggttat cgctggatgt gtctgcggcg tttatcata ttctcttca tctgtctgct 420
atgcctcatc ttcttattgg ttcttctgga ttatcaaggt atgttgcccg tttgtcctct 480
aattccagga tcaacaacaa ccagtacggg accatgcaaa acctgcacga ctctgtctca 540
aggcaactct atgtttccct catgttgctg taaaaacct acggttgga attgcacctg 600
tattcccatc ccatcgtcct gggttttcgc aaaataccta tgggagtggg cctcagtccg 660
tttctcttgg ctcagtttac tagtgccatt tgttcagtgg ttcgtagggc tttccccac 720
tgtttggtt tcagctatat ggatgatgtg gtattggggg ccaagtctgt acagcatcgt 780
gagtccttt ataccgtgt taccaatttt cttttgtctc tgggtataca tttaaaccct 840
aacaaaacaa aaagatgggg ttattcccta aacttcatgg gttacataat tggaagtgg 900
ggaacattgc cacaggatca tattgtacaa aagatcaaac actgttttag aaaacttct 960
gttaacaggc ctattgattg gaaagtatgt caaagaattg tgggtctttt gggctttgct 1020
gtccattta cacaatgtgg atatcctgcc ttaatgcctt tgtatgcatg tatacaggct 1080
aaacaggctt tcactttctc gccaaattac aaggcctttc taagtaaaca gtacatgaac 1140
ctttaccccg ttgtcggca acggcctggt ctgtgccaag tgtttgctga cgcaaccccc 1200
actggttggg gcttggccat aggccatcag cgcagtgtg gaacctttgt ggctcctctg 1260
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ctcatcgga ctgacaattc tgctgtcctc tcgcggaaat atacatcgtt tccatggctg 1380
ctaggctgta ctgccaactg gatccttcgc gggacgtcct ttgtttacgt cccgtcggcg 1440
ctgaatcccg cggacgacct ctctcggggc cgcttgggac tctatcgtcc cttctcctg 1500
ctgccgttcc agccgaccac ggggcgcacc tctctttacg cggctctccc gtctgtgct 1560



185

tattcctcta cagtacctat ctttaatcct gaatggcaaa ctccttcctt tcctaagatt 2558
catttacaag aggacattat tgataggtgt caacaatttg tgggccctct cactgtaaat 2618
gaaaagagaa gattgaaatt aattatgcct gctagattct atcctacca cactaaatat 2678
ttgcccttag acaaaggaat taaaccttat tatccagatc aggtagttaa tcattacttc 2738
caaaccagac attatttaca tactcttttg aaggctggta ttctatataa gagggaaacc 2798
acacgtagcg catcattttg cgggtcacca tattcttggg aacaagagct acagcatggg 2858
aggttgggtca ttaaaacctc gcaaaggcat ggggacgaat ctttctgttc ccaaccctct 2918
gggattcttt cccgatcatc agttggaccc tgcattcgga gccaaactcaa acaatccaga 2978
ttggggacttc aaccccatca aggaccactg gccagcagcc aaccaggtag gagtggggagc 3038
attcggggcca ggggtcaccc ctccacacgg cggtattttg ggggtggagcc ctccaggtca 3098
gggcatattg accacagtgt caacaattcc tctcctgcc tccaccaatc ggcagtcagg 3158
aaggcagcct actcccatct ctccacctct aagagacagt catcctcagg ccatgcagtg 3218
gaa 3221

<210> 134

<211> 185

<212> PRT

<213> Hepatitis B virus

<400> 134

Met	Asp	Ile	Asp	Pro	Tyr	Lys	Glu	Phe	Gly	Ala	Thr	Val	Glu	Leu	Leu
1				5					10					15	
Ser	Phe	Leu	Pro	Ser	Asp	Phe	Phe	Pro	Ser	Val	Arg	Asp	Leu	Leu	Asp
			20					25					30		
Thr	Ala	Ser	Ala	Leu	Tyr	Arg	Glu	Ala	Leu	Glu	Ser	Pro	Glu	His	Cys
			35				40					45			
Ser	Pro	His	His	Thr	Ala	Leu	Arg	Gln	Ala	Ile	Leu	Cys	Trp	Gly	Glu
	50					55				60					
Leu	Met	Thr	Leu	Ala	Thr	Trp	Val	Gly	Asn	Asn	Leu	Glu	Asp	Pro	Ala
	65				70				75					80	
Ser	Arg	Asp	Leu	Val	Val	Asn	Tyr	Val	Asn	Thr	Asn	Met	Gly	Leu	Lys
				85					90				95		
Ile	Arg	Gln	Leu	Leu	Trp	Phe	His	Ile	Ser	Cys	Leu	Thr	Phe	Gly	Arg
			100					105					110		
Glu	Thr	Val	Leu	Glu	Tyr	Leu	Val	Ser	Phe	Gly	Val	Trp	Ile	Arg	Thr
		115				120					125				
Pro	Pro	Ala	Tyr	Arg	Pro	Pro	Asn	Ala	Pro	Ile	Leu	Ser	Thr	Leu	Pro
	130					135					140				
Glu	Thr	Thr	Val	Val	Arg	Arg	Arg	Asp	Arg	Gly	Arg	Ser	Pro	Arg	Arg
	145				150				155					160	
Arg	Thr	Pro	Ser	Pro	Arg	Arg	Arg	Arg	Ser	Gln	Ser	Pro	Arg	Arg	Arg
				165					170				175		
Arg	Ser	Gln	Ser	Arg	Glu	Ser	Gln	Cys							
			180					185							

<210> 135
<211> 188
<212> PRT
<213> Woodchuck hepatitis B virus

<400> 135
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ser Ser Tyr Gln Leu Leu
1 5 10 15
Asn Phe Leu Pro Leu Asp Phe Phe Pro Asp Leu Asn Ala Leu Val Asp
20 25 30
Thr Ala Thr Ala Leu Tyr Glu Glu Glu Leu Thr Gly Arg Glu His Cys
35 40 45
Ser Pro His His Thr Ala Ile Arg Gln Ala Leu Val Cys Trp Asp Glu
50 55 60
Leu Thr Lys Leu Ile Ala Trp Met Ser Ser Asn Ile Thr Ser Glu Gln
65 70 75 80
Val Arg Thr Ile Ile Val Asn His Val Asn Asp Thr Trp Gly Leu Lys
85 90 95
Val Arg Gln Ser Leu Trp Phe His Leu Ser Cys Leu Thr Phe Gly Gln
100 105 110
His Thr Val Gln Glu Phe Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125
Pro Ala Pro Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140
Glu His Thr Val Ile Arg Arg Arg Gly Gly Ala Arg Ala Ser Arg Ser
145 150 155 160
Pro Arg Arg Arg Thr Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro
165 170 175
Arg Arg Arg Arg Ser Gln Ser Pro Ser Thr Asn Cys
180 185

<210> 136
<211> 217
<212> PRT
<213> Ground squirrel hepatitis virus .

<400> 136
Met Tyr Leu Phe His Leu Cys Leu Val Phe Ala Cys Val Pro Cys Pro
1 5 10 15
Thr Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Asp Met Asp
20 25 30
Ile Asp Pro Tyr Lys Glu Phe Gly Ser Ser Tyr Gln Leu Leu Asn Phe
35 40 45
Leu Pro Leu Asp Phe Phe Pro Asp Leu Asn Ala Leu Val Asp Thr Ala
50 55 60

Ala	Ala	Leu	Tyr	Glu	Glu	Glu	Leu	Thr	Gly	Arg	Glu	His	Cys	Ser	Pro
65					70					75					80
His	His	Thr	Ala	Ile	Arg	Gln	Ala	Leu	Val	Cys	Trp	Glu	Glu	Leu	Thr
				85					90					95	
Arg	Leu	Ile	Thr	Trp	Met	Ser	Glu	Asn	Thr	Thr	Glu	Glu	Val	Arg	Arg
			100					105					110		
Ile	Ile	Val	Asp	His	Val	Asn	Asn	Thr	Trp	Gly	Leu	Lys	Val	Arg	Gln
		115					120					125			
Thr	Leu	Trp	Phe	His	Leu	Ser	Cys	Leu	Thr	Phe	Gly	Gln	His	Thr	Val
	130					135					140				
Gln	Glu	Phe	Leu	Val	Ser	Phe	Gly	Val	Trp	Ile	Arg	Thr	Pro	Ala	Pro
145					150					155					160
Tyr	Arg	Pro	Pro	Asn	Ala	Pro	Ile	Leu	Ser	Thr	Leu	Pro	Glu	His	Thr
				165					170					175	
Val	Ile	Arg	Arg	Arg	Gly	Gly	Ser	Arg	Ala	Ala	Arg	Ser	Pro	Arg	Arg
			180					185					190		
Arg	Thr	Pro	Ser	Pro	Arg	Arg	Arg	Arg	Ser	Gln	Ser	Pro	Arg	Arg	Arg
		195					200					205			
Arg	Ser	Gln	Ser	Pro	Ala	Ser	Asn	Cys							
	210						215								

<210> 137

<211> 262

<212> PRT

<213> Snow Goose Hepatitis B Virus

<400> 137

Met	Asp	Val	Asn	Ala	Ser	Arg	Ala	Leu	Ala	Asn	Val	Tyr	Asp	Leu	Pro
1				5					10					15	
Asp	Asp	Phe	Phe	Pro	Lys	Ile	Glu	Asp	Leu	Val	Arg	Asp	Ala	Lys	Asp
			20					25					30		
Ala	Leu	Glu	Pro	Tyr	Trp	Lys	Ser	Asp	Ser	Ile	Lys	Lys	His	Val	Leu
		35					40					45			
Ile	Ala	Thr	His	Phe	Val	Asp	Leu	Ile	Glu	Asp	Phe	Trp	Gln	Thr	Thr
	50					55					60				
Gln	Gly	Met	His	Glu	Ile	Ala	Glu	Ala	Ile	Arg	Ala	Val	Ile	Pro	Pro
65					70					75					80
Thr	Thr	Ala	Pro	Val	Pro	Ser	Gly	Tyr	Leu	Ile	Gln	His	Asp	Glu	Ala
				85					90					95	
Glu	Glu	Ile	Pro	Leu	Gly	Asp	Leu	Phe	Lys	Glu	Gln	Glu	Glu	Arg	Ile
			100					105					110		
Val	Ser	Phe	Gln	Pro	Asp	Tyr	Pro	Ile	Thr	Ala	Arg	Ile	His	Ala	His
		115					120					125			

Leu Lys Ala Tyr Ala Lys Ile Asn Glu Glu Ser Leu Asp Arg Ala Arg
 130 135 140

Arg Leu Leu Trp Trp His Tyr Asn Cys Leu Leu Trp Gly Glu Ala Thr
 145 150 155 160

Val Thr Asn Tyr Ile Ser Arg Leu Arg Thr Trp Leu Ser Thr Pro Glu
 165 170 175

Lys Tyr Arg Gly Arg Asp Ala Pro Thr Ile Glu Ala Ile Thr Arg Pro
 180 185 190

Ile Gln Val Ala Gln Gly Gly Arg Lys Thr Ser Thr Ala Thr Arg Lys
 195 200 205

Pro Arg Gly Leu Glu Pro Arg Arg Arg Lys Val Lys Thr Thr Val Val
 210 215 220

Tyr Gly Arg Arg Arg Ser Lys Ser Arg Glu Arg Arg Ala Ser Ser Pro
 225 230 235 240

Gln Arg Ala Gly Ser Pro Leu Pro Arg Ser Ser Ser Ser His His Arg
 245 250 255

Ser Pro Ser Pro Arg Lys
 260

<210> 138
 <211> 305
 <212> PRT
 <213> Duck hepatitis B virus

<400> 138
 Met Trp Asp Leu Arg Leu His Pro Ser Pro Phe Gly Ala Ala Cys Gln
 1 5 10 15

Gly Ile Phe Thr Ser Ser Leu Leu Leu Phe Leu Val Thr Val Pro Leu
 20 25 30

Val Cys Thr Ile Val Tyr Asp Ser Cys Leu Cys Met Asp Ile Asn Ala
 35 40 45

Ser Arg Ala Leu Ala Asn Val Tyr Asp Leu Pro Asp Asp Phe Phe Pro
 50 55 60

Lys Ile Asp Asp Leu Val Arg Asp Ala Lys Asp Ala Leu Glu Pro Tyr
 65 70 75 80

Trp Arg Asn Asp Ser Ile Lys Lys His Val Leu Ile Ala Thr His Phe
 85 90 95

Val Asp Leu Ile Glu Asp Phe Trp Gln Thr Thr Gln Gly Met His Glu
 100 105 110

Ile Ala Glu Ala Leu Arg Ala Ile Ile Pro Ala Thr Thr Ala Pro Val
 115 120 125

Pro Gln Gly Phe Leu Val Gln His Glu Glu Ala Glu Glu Ile Pro Leu
 130 135 140

Gly	Glu	Leu	Phe	Arg	Tyr	Gln	Glu	Glu	Arg	Leu	Thr	Asn	Phe	Gln	Pro
145					150					155					160
Asp	Tyr	Pro	Val	Thr	Ala	Arg	Ile	His	Ala	His	Leu	Lys	Ala	Tyr	Ala
				165					170					175	
Lys	Ile	Asn	Glu	Glu	Ser	Leu	Asp	Arg	Ala	Arg	Arg	Leu	Leu	Trp	Trp
			180					185					190		
His	Tyr	Asn	Cys	Leu	Leu	Trp	Gly	Glu	Pro	Asn	Val	Thr	Asn	Tyr	Ile
		195					200					205			
Ser	Arg	Leu	Arg	Thr	Trp	Leu	Ser	Thr	Pro	Glu	Lys	Tyr	Arg	Gly	Lys
	210					215					220				
Asp	Ala	Pro	Thr	Ile	Glu	Ala	Ile	Thr	Arg	Pro	Ile	Gln	Val	Ala	Gln
225					230					235					240
Gly	Gly	Arg	Asn	Lys	Thr	Gln	Gly	Val	Arg	Lys	Ser	Arg	Gly	Leu	Glu
			245						250					255	
Pro	Arg	Arg	Arg	Arg	Val	Lys	Thr	Thr	Ile	Val	Tyr	Gly	Arg	Arg	Arg
			260					265					270		
Ser	Lys	Ser	Arg	Glu	Arg	Arg	Ala	Pro	Thr	Pro	Gln	Arg	Ala	Gly	Ser
		275					280					285			
Pro	Leu	Pro	Arg	Thr	Ser	Arg	Asp	His	His	Arg	Ser	Pro	Ser	Pro	Arg
	290					295					300				
Glu															
305															
<210>	139														
<211>	212														
<212>	PRT														
<213>	Haemophilus influenzae														
<400>	139														
Met	Lys	Lys	Thr	Leu	Leu	Gly	Ser	Leu	Ile	Leu	Leu	Ala	Phe	Ala	Gly
1				5					10				15		
Asn	Val	Gln	Ala	Ala	Ala	Asn	Ala	Asp	Thr	Ser	Gly	Thr	Val	Thr	Phe
			20					25					30		
Phe	Gly	Lys	Val	Val	Glu	Asn	Thr	Cys	Gln	Val	Asn	Gln	Asp	Ser	Glu
		35					40					45			
Tyr	Glu	Cys	Asn	Leu	Asn	Asp	Val	Gly	Lys	Asn	His	Leu	Ser	Gln	Gln
	50					55					60				
Gly	Tyr	Thr	Ala	Met	Gln	Thr	Pro	Phe	Thr	Ile	Thr	Leu	Glu	Asn	Cys
65					70					75				80	
Asn	Val	Thr	Thr	Thr	Asn	Asn	Lys	Pro	Lys	Ala	Thr	Lys	Val	Gly	Val
				85					90					95	
Tyr	Phe	Tyr	Ser	Trp	Glu	Ile	Ala	Asp	Lys	Asp	Asn	Lys	Tyr	Thr	Leu
			100					105					110		

Lys Asn Ile Lys Glu Asn Thr Gly Thr Asn Asp Ser Ala Asn Lys Val
 115 120 125

Asn Ile Gln Leu Leu Glu Asp Asn Gly Thr Ala Glu Ile Lys Val Val
 130 135 140

Gly Lys Thr Thr Thr Asp Phe Thr Ser Glu Asn His Asn Gly Ala Gly
 145 150 155 160

Ala Asp Pro Val Ala Thr Asn Lys His Ile Ser Ser Leu Thr Pro Leu
 165 170 175

Asn Asn Gln Asn Ser Ile Asn Leu His Tyr Ile Ala Gln Tyr Tyr Ala
 180 185 190

Thr Gly Val Ala Glu Ala Gly Lys Val Pro Ser Ser Val Asn Ser Gln
 195 200 205

Ile Ala Tyr Glu
 210

<210> 140
 <211> 139
 <212> PRT
 <213> Pseudomonas stutzeri

<400> 140
 Met Lys Ala Gln Met Gln Lys Gly Phe Thr Leu Ile Glu Leu Met Ile
 1 5 10 15

Val Val Ala Ile Ile Gly Ile Leu Ala Ala Ile Ala Leu Pro Ala Tyr
 20 25 30

Gln Asp Tyr Thr Val Arg Ser Asn Ala Ala Ala Ala Leu Ala Glu Ile
 35 40 45

Thr Pro Gly Lys Ile Gly Phe Glu Gln Ala Ile Asn Glu Gly Lys Thr
 50 55 60

Pro Ser Leu Thr Ser Thr Asp Glu Gly Tyr Ile Gly Ile Thr Asp Ser
 65 70 75 80

Thr Ser Tyr Cys Asp Val Asp Leu Asp Thr Ala Ala Asp Gly His Ile
 85 90 95

Glu Cys Thr Ala Lys Gly Gly Asn Ala Gly Lys Phe Asp Gly Lys Thr
 100 105 110

Ile Thr Leu Asn Arg Thr Ala Asp Gly Glu Trp Ser Cys Ala Ser Thr
 115 120 125

Leu Asp Ala Lys Tyr Lys Pro Gly Lys Cys Ser
 130 135

<210> 141
 <211> 59
 <212> PRT
 <213> Caulobacter crescentus

<400> 141
Met Thr Lys Phe Val Thr Arg Phe Leu Lys Asp Glu Ser Gly Ala Thr
1 5 10 15
Ala Ile Glu Tyr Gly Leu Ile Val Ala Leu Ile Ala Val Val Ile Val
20 25 30
Thr Ala Val Thr Thr Leu Gly Thr Asn Leu Arg Thr Ala Phe Thr Lys
35 40 45
Ala Gly Ala Ala Val Ser Thr Ala Ala Gly Thr
50 55

<210> 142
<211> 173
<212> PRT
<213> Escherichia coli

<400> 142
Met Ala Val Val Ser Phe Gly Val Asn Ala Ala Pro Thr Ile Pro Gln
1 5 10 15
Gly Gln Gly Lys Val Thr Phe Asn Gly Thr Val Val Asp Ala Pro Cys
20 25 30
Ser Ile Ser Gln Lys Ser Ala Asp Gln Ser Ile Asp Phe Gly Gln Leu
35 40 45
Ser Lys Ser Phe Leu Glu Ala Gly Gly Val Ser Lys Pro Met Asp Leu
50 55 60
Asp Ile Glu Leu Val Asn Cys Asp Ile Thr Ala Phe Lys Gly Gly Asn
65 70 75 80
Gly Ala Gln Lys Gly Thr Val Lys Leu Ala Phe Thr Gly Pro Ile Val
85 90 95
Asn Gly His Ser Asp Glu Leu Asp Thr Asn Gly Gly Thr Gly Thr Ala
100 105 110
Ile Val Val Gln Gly Ala Gly Lys Asn Val Val Phe Asp Gly Ser Glu
115 120 125
Gly Asp Ala Asn Thr Leu Lys Asp Gly Glu Asn Val Leu His Tyr Thr
130 135 140
Ala Val Val Lys Lys Ser Ser Ala Val Gly Ala Ala Val Thr Glu Gly
145 150 155 160
Ala Phe Ser Ala Val Ala Asn Phe Asn Leu Thr Tyr Gln
165 170

<210> 143
<211> 173
<212> PRT
<213> Escherichia coli

<400> 143

Met	Ala	Val	Val	Ser	Phe	Gly	Val	Asn	Ala	Ala	Pro	Thr	Ile	Pro	Gln
1				5					10					15	
Gly	Gln	Gly	Lys	Val	Thr	Phe	Asn	Gly	Thr	Val	Val	Asp	Ala	Pro	Cys
			20					25					30		
Ser	Ile	Ser	Gln	Lys	Ser	Ala	Asp	Gln	Ser	Ile	Asp	Phe	Gly	Gln	Leu
		35					40					45			
Ser	Lys	Ser	Phe	Leu	Glu	Ala	Gly	Gly	Val	Ser	Lys	Pro	Met	Asp	Leu
	50					55					60				
Asp	Ile	Glu	Leu	Val	Asn	Cys	Asp	Ile	Thr	Ala	Phe	Lys	Gly	Gly	Asn
65					70					75					80
Gly	Ala	Gln	Lys	Gly	Thr	Val	Lys	Leu	Ala	Phe	Thr	Gly	Pro	Ile	Val
				85					90					95	
Asn	Gly	His	Ser	Asp	Glu	Leu	Asp	Thr	Asn	Gly	Gly	Thr	Gly	Thr	Ala
			100					105					110		
Ile	Val	Val	Gln	Gly	Ala	Gly	Lys	Asn	Val	Val	Phe	Asp	Gly	Ser	Glu
		115					120					125			
Gly	Asp	Ala	Asn	Thr	Leu	Lys	Asp	Gly	Glu	Asn	Val	Leu	His	Tyr	Thr
	130					135					140				
Ala	Val	Val	Lys	Lys	Ser	Ser	Ala	Val	Gly	Ala	Ala	Val	Thr	Glu	Gly
145					150					155					160
Ala	Phe	Ser	Ala	Val	Ala	Asn	Phe	Asn	Leu	Thr	Tyr	Gln			
				165					170						

<210> 144

<211> 172

<212> PRT

<213> Escherichia coli

<400> 144

Met	Ala	Val	Val	Ser	Phe	Gly	Val	Asn	Ala	Ala	Pro	Thr	Thr	Pro	Gln
1				5					10					15	
Gly	Gln	Gly	Arg	Val	Thr	Phe	Asn	Gly	Thr	Val	Val	Asp	Ala	Pro	Cys
			20					25					30		
Ser	Ile	Ser	Gln	Lys	Ser	Ala	Asp	Gln	Ser	Ile	Asp	Phe	Gly	Gln	Leu
		35					40					45			
Ser	Lys	Ser	Phe	Leu	Ala	Asn	Asp	Gly	Gln	Ser	Lys	Pro	Met	Asn	Leu
	50					55					60				
Asp	Ile	Glu	Leu	Val	Asn	Cys	Asp	Ile	Thr	Ala	Phe	Lys	Asn	Gly	Asn
65					70					75					80
Ala	Lys	Thr	Gly	Ser	Val	Lys	Leu	Ala	Phe	Thr	Gly	Pro	Thr	Val	Ser
				85					90					95	
Gly	His	Pro	Ser	Glu	Leu	Ala	Thr	Asn	Gly	Gly	Pro	Gly	Thr	Ala	Ile
			100					105					110		
Met	Ile	Gln	Ala	Ala	Gly	Lys	Asn	Val	Pro	Phe	Asp	Gly	Thr	Glu	Gly

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115              120              125
Asp Pro Asn Leu Leu Lys Asp Gly Asp Asn Val Leu His Tyr Thr Thr
130              135              140

Val Gly Lys Lys Ser Ser Asp Gly Asn Ala Gln Ile Thr Glu Gly Ala
145              150              155              160

Phe Ser Gly Val Ala Thr Phe Asn Leu Ser Tyr Gln
165              170

<210> 145
<211> 853
<212> DNA
<213> Escherichia coli

<220>
<221> CDS
<222> (281)..(829)

<400> 145
acgtttctgt ggctcgacgc atcttctctca ttcttctctc caaaaaccac ctcatgcaat 60
ataaacatct ataaataaag ataacaaata gaatattaag ccaacaaata aactgaaaaa 120
gtttgtccgc gatgctttac ctctatgagt caaaatggcc ccaatgtttc atcttttggg 180
ggaaaactgtg cagtgttggc agtcaaactc gttgacaaac aaagtgtaca gaacgactgc 240
ccatgtcgat ttagaaatag ttttttgaaa ggaaagcagc atg aaa att aaa act 295
Met Lys Ile Lys Thr
1 5

ctg gca atc gtt gtt ctg tgc gct ctg tcc ctc agt tct acg acg gct 343
Leu Ala Ile Val Val Leu Ser Ala Leu Ser Leu Ser Ser Thr Thr Ala
10 15 20

ctg gcc gct gcc acg acg gtt aat ggt ggg acc gtt cac ttt aaa ggg 391
Leu Ala Ala Ala Thr Thr Val Asn Gly Gly Thr Val His Phe Lys Gly
25 30 35

gaa gtt gtt aac gcc gct tgc gca gtt gat gca ggc tct gtt gat caa 439
Glu Val Val Asn Ala Ala Cys Ala Val Asp Ala Gly Ser Val Asp Gln
40 45 50

acc gtt cag tta gga cag gtt cgt acc gca tgc ctg gca cag gaa gga 487
Thr Val Gln Leu Gly Gln Val Arg Thr Ala Ser Leu Ala Gln Glu Gly
55 60 65

gca acc agt tct gct gtc ggt ttt aac att cag ctg aat gat tgc gat 535
Ala Thr Ser Ser Ala Val Gly Phe Asn Ile Gln Leu Asn Asp Cys Asp
70 75 80 85

acc aat gtt gca tct aaa gcc gct gtt gcc ttt tta ggt acg gcg att 583
Thr Asn Val Ala Ser Lys Ala Ala Val Ala Phe Leu Gly Thr Ala Ile
90 95 100

gat gcg ggt cat acc aac gtt ctg gct ctg cag agt tca gct gcg ggt 631
Asp Ala Gly His Thr Asn Val Leu Ala Leu Gln Ser Ser Ala Ala Gly
105 110 115

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agc gca aca aac gtt ggt gtg cag atc ctg gac aga acg ggt gct gcg 679
Ser Ala Thr Asn Val Gly Val Gln Ile Leu Asp Arg Thr Gly Ala Ala
      120              125              130

ctg acg ctg gat ggt gcg aca ttt agt tca gaa aca acc ctg aat aac 727
Leu Thr Leu Asp Gly Ala Thr Phe Ser Ser Glu Thr Thr Leu Asn Asn
      135              140              145

gga acc aat acc att ccg ttc cag gcg cgt tat ttt gca acc ggg gcc 775
Gly Thr Asn Thr Ile Pro Phe Gln Ala Arg Tyr Phe Ala Thr Gly Ala
      150              155              160              165

gca acc ccg ggt gct gct aat gcg gat gcg acc ttc aag gtt cag tat 823
Ala Thr Pro Gly Ala Ala Asn Ala Asp Ala Thr Phe Lys Val Gln Tyr
      170              175              180

caa taa cctacctagg ttcagggacg ttca 853
Gln

```

<210> 146
 <211> 182
 <212> PRT
 <213> Escherichia coli

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<400> 146
Met Lys Ile Lys Thr Leu Ala Ile Val Val Leu Ser Ala Leu Ser Leu
  1           5           10           15
Ser Ser Thr Thr Ala Leu Ala Ala Ala Thr Thr Val Asn Gly Gly Thr
      20           25           30
Val His Phe Lys Gly Glu Val Val Asn Ala Ala Cys Ala Val Asp Ala
      35           40           45
Gly Ser Val Asp Gln Thr Val Gln Leu Gly Gln Val Arg Thr Ala Ser
      50           55           60
Leu Ala Gln Glu Gly Ala Thr Ser Ser Ala Val Gly Phe Asn Ile Gln
      65           70           75           80
Leu Asn Asp Cys Asp Thr Asn Val Ala Ser Lys Ala Ala Val Ala Phe
      85           90           95
Leu Gly Thr Ala Ile Asp Ala Gly His Thr Asn Val Leu Ala Leu Gln
      100          105          110
Ser Ser Ala Ala Gly Ser Ala Thr Asn Val Gly Val Gln Ile Leu Asp
      115          120          125
Arg Thr Gly Ala Ala Leu Thr Leu Asp Gly Ala Thr Phe Ser Ser Glu
      130          135          140
Thr Thr Leu Asn Asn Gly Thr Asn Thr Ile Pro Phe Gln Ala Arg Tyr
      145          150          155          160
Phe Ala Thr Gly Ala Ala Thr Pro Gly Ala Ala Asn Ala Asp Ala Thr
      165          170          175
Phe Lys Val Gln Tyr Gln
      180

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<210> 147
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> FLAG peptide

<400> 147
Cys Gly Gly Asp Tyr Lys Asp Asp Asp Asp Lys
1 5 10

<210> 148
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 148
ccggaattca tggacattga cccttataaa g 31

<210> 149
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 149
gtgcagtatg gtgaggtgag gaatgctcag gagactc 37

<210> 150
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 150
gsgtctcctg agcattcctc acctcaccat actgcac 37

<210> 151
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 151
cttcctcaaaag tgagggaaga aatgtgaaac cac 33

<210> 152
<211> 47
<212> DNA
<213> Artificial Sequence

<220>

<223> primer

<400> 152

cgcggtcccaa gcttctaaac aacagtagtc tccggaagcg ttgatag

47

<210> 153

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 153

gtgggtttcac atttcttccc tcacttttgg aag

33

<210> 154

<211> 281

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 154

Met Ser Glu Tyr Gln Pro Ser Leu Phe Ala Leu Asn Pro Met Gly Phe
1 5 10 15

Ser Pro Leu Asp Gly Ser Lys Ser Thr Asn Glu Asn Val Ser Ala Ser
20 25 30

Thr Ser Thr Ala Lys Pro Met Val Gly Gln Leu Ile Phe Asp Lys Phe
35 40 45

Ile Lys Thr Glu Glu Asp Pro Ile Ile Lys Gln Asp Thr Pro Ser Asn
50 55 60

Leu Asp Phe Asp Phe Ala Leu Pro Gln Thr Ala Thr Ala Pro Asp Ala
65 70 75 80

Lys Thr Val Leu Pro Ile Pro Glu Leu Asp Asp Ala Val Val Glu Ser
85 90 95

Phe Phe Ser Ser Ser Thr Asp Ser Thr Pro Met Phe Glu Tyr Glu Asn
100 105 110

Leu Glu Asp Asn Ser Lys Glu Trp Thr Ser Leu Phe Asp Asn Asp Ile
115 120 125

Pro Val Thr Thr Asp Asp Val Ser Leu Ala Asp Lys Ala Ile Glu Ser
130 135 140

Thr Glu Glu Val Ser Leu Val Pro Ser Asn Leu Glu Val Ser Thr Thr
145 150 155 160

Ser Phe Leu Pro Thr Pro Val Leu Glu Asp Ala Lys Leu Thr Gln Thr
165 170 175

Arg Lys Val Lys Lys Pro Asn Ser Val Val Lys Lys Ser His His Val
180 185 190

Gly Lys Asp Asp Glu Ser Arg Leu Asp His Leu Gly Val Val Ala Tyr
195 200 205

Asn Arg Lys Gln Arg Ser Ile Pro Leu Ser Pro Ile Val Pro Glu Ser
210 215 220

Ser Asp Pro Ala Ala Leu Lys Arg Ala Arg Asn Thr Glu Ala Ala Arg
225 230 235 240

Arg Ser Arg Ala Arg Lys Leu Gln Arg Met Lys Gln Leu Glu Asp Lys
245 250 255

Val Glu Glu Leu Leu Ser Lys Asn Tyr His Leu Glu Asn Glu Val Ala
260 265 270

Arg Leu Lys Lys Leu Val Gly Glu Arg
275 280

<210> 155

<211> 181

<212> PRT

<213> Escherichia coli

<400> 155

Met Lys Ile Lys Thr Leu Ala Ile Val Val Leu Ser Ala Leu Ser Leu
1 5 10 15

Ser Ser Thr Ala Ala Leu Ala Ala Ala Thr Thr Val Asn Gly Gly Thr
20 25 30

Val His Phe Lys Gly Glu Val Val Asn Ala Ala Cys Ala Val Asp Ala
35 40 45

Gly Ser Val Asp Gln Thr Val Gln Leu Gly Gln Val Arg Thr Ala Ser
50 55 60

Leu Ala Gln Glu Gly Ala Thr Ser Ser Ala Val Gly Phe Asn Ile Gln
65 70 75 80

Leu Asn Asp Cys Asp Thr Asn Val Ala Ser Lys Ala Ala Val Ala Phe
85 90 95

Leu Gly Thr Ala Ile Asp Ala Gly His Thr Asn Val Leu Ala Leu Gln
100 105 110

Ser Ser Ala Ala Gly Ser Ala Thr Asn Val Gly Val Gln Ile Leu Asp
115 120 125

Arg Thr Gly Ala Ala Leu Thr Leu Asp Gly Ala Thr Phe Ser Ser Glu
130 135 140

Thr Thr Leu Asn Asn Gly Thr Asn Thr Ile Pro Phe Gln Ala Arg Tyr
145 150 155 160

Phe Ala Gly Ala Ala Thr Pro Gly Ala Ala Asn Ala Asp Ala Thr Phe
165 170 175

Lys Val Gln Tyr Gln
180

<210> 156
<211> 447
<212> DNA
<213> Hepatitis B

<220>
<221> CDS
<222> (1) .. (447)

<400> 156
atg gac att gac cct tat aaa gaa ttt gga gct act gtg gag tta ctc 48
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15

tcg ttt ttg cct tct gac ttc ttt cct tcc gta cga gat ctt cta gat 96
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30

acc gcc gca gct ctg tat cgg gat gcc tta gag tct cct gag cat tgt 144
Thr Ala Ala Ala Leu Tyr Arg Asp Ala Leu Glu Ser Pro Glu His Cys
35 40 45

tca cct cac cat act gca ctc agg caa gca att ctt tgc tgg gga gac 192
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp
50 55 60

tta atg act cta gct acc tgg gtg ggt act aat tta gaa gat cca gca 240
Leu Met Thr Leu Ala Thr Trp Val Gly Thr Asn Leu Glu Asp Pro Ala
.65 70 75 80

tct agg gac cta gta gtc agt tat gtc aac act aat gtg ggc cta aag 288
Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Val Gly Leu Lys
85 90 95

ttc aga caa tta ttg tgg ttt cac att tct tgt ctc act ttt gga aga 336
Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
100 105 110

gaa acg gtt cta gag tat ttg gtc tct ttt gga gtg tgg att cgc act 384
Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125

cct cca gcc tat aga cca cca aat gcc cct atc cta tca acg ctt ccg 432
Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140

gag act act gtt gtt 447
Glu Thr Thr Val Val
145

<210> 157
<211> 149
<212> PRT
<213> Hepatitis B

<400> 157
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15

Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp

20	25	30
Thr Ala Ala Ala Leu Tyr Arg Asp Ala Leu Glu Ser Pro Glu His Cys		
35	40	45
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp		
50	55	60
Leu Met Thr Leu Ala Thr Trp Val Gly Thr Asn Leu Glu Asp Pro Ala		
65	70	75
Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Val Gly Leu Lys		
85	90	95
Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg		
100	105	110
Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr		
115	120	125
Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro		
130	135	140
Glu Thr Thr Val Val		
145		

<210> 158
 <211> 152
 <212> PRT
 <213> Hepatitis B

<400> 158
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30
Thr Ala Ala Ala Leu Tyr Arg Asp Ala Leu Glu Ser Pro Glu His Cys
35 40 45
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp
50 55 60
Leu Met Thr Leu Ala Thr Trp Val Gly Thr Asn Leu Glu Asp Gly Gly
65 70 75 80
Lys Gly Gly Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Val
85 90 95
Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr
100 105 110
Phe Gly Arg Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp
115 120 125
Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser
130 135 140

Thr Leu Pro Glu Thr Thr Val Val
145 150

<210> 159
<211> 132
<212> PRT
<213> Bacteriophage Q Beta

<400> 159
Ala Lys Leu Glu Thr Val Thr Leu Gly Asn Ile Gly Lys Asp Gly Lys
1 5 10 15
Gln Thr Leu Val Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly Val
20 25 30
Ala Ser Leu Ser Gln Ala Gly Ala Val Pro Ala Leu Glu Lys Arg Val
35 40 45
Thr Val Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys Val
50 55 60
Gln Val Lys Ile Gln Asn Pro Thr Ala Cys Thr Ala Asn Gly Ser Cys
65 70 75 80
Asp Pro Ser Val Thr Arg Gln Ala Tyr Ala Asp Val Thr Phe Ser Phe
85 90 95
Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu Leu
100 105 110
Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln Leu
115 120 125
Asn Pro Ala Tyr
130

<210> 160
<211> 129
<212> PRT
<213> Bacteriophage R 17

<400> 160
Ala Ser Asn Phe Thr Gln Phe Val Leu Val Asn Asp Gly Gly Thr Gly
1 5 10 15
Asn Val Thr Val Ala Pro Ser Asn Phe Ala Asn Gly Val Ala Glu Trp
20 25 30
Ile Ser Ser Asn Ser Arg Ser Gln Ala Tyr Lys Val Thr Cys Ser Val
35 40 45
Arg Gln Ser Ser Ala Gln Asn Arg Lys Tyr Thr Ile Lys Val Glu Val
50 55 60
Pro Lys Val Ala Thr Gln Thr Val Gly Gly Val Glu Leu Pro Val Ala
65 70 75 80
Ala Trp Arg Ser Tyr Leu Asn Met Glu Leu Thr Ile Pro Ile Phe Ala
85 90 95

Thr Asn Ser Asp Cys Glu Leu Ile Val Lys Ala Met Gln Gly Leu Leu
100 105 110

Lys Asp Gly Asn Pro Ile Pro Ser Ala Ile Ala Ala Asn Ser Gly Ile
115 120 125

Tyr

<210> 161
<211> 130
<212> PRT
<213> Bacteriophage fr

<400> 161

Met Ala Ser Asn Phe Glu Glu Phe Val Leu Val Asp Asn Gly Gly Thr
1 5 10 15

Gly Asp Val Lys Val Ala Pro Ser Asn Phe Ala Asn Gly Val Ala Glu
20 25 30

Trp Ile Ser Ser Asn Ser Arg Ser Gln Ala Tyr Lys Val Thr Cys Ser
35 40 45

Val Arg Gln Ser Ser Ala Asn Asn Arg Lys Tyr Thr Val Lys Val Glu
50 55 60

Val Pro Lys Val Ala Thr Gln Val Gln Gly Gly Val Glu Leu Pro Val
65 70 75 80

Ala Ala Trp Arg Ser Tyr Met Asn Met Glu Leu Thr Ile Pro Val Phe
85 90 95

Ala Thr Asn Asp Asp Cys Ala Leu Ile Val Lys Ala Leu Gln Gly Thr
100 105 110

Phe Lys Thr Gly Asn Pro Ile Ala Thr Ala Ile Ala Ala Asn Ser Gly
115 120 125

Ile Tyr
130

<210> 162
<211> 130
<212> PRT
<213> Bacteriophage GA

<400> 162

Met Ala Thr Leu Arg Ser Phe Val Leu Val Asp Asn Gly Gly Thr Gly
1 5 10 15

Asn Val Thr Val Val Pro Val Ser Asn Ala Asn Gly Val Ala Glu Trp
20 25 30

Leu Ser Asn Asn Ser Arg Ser Gln Ala Tyr Arg Val Thr Ala Ser Tyr

35	40	45
Arg Ala Ser Gly Ala Asp Lys Arg Lys Tyr Ala Ile Lys Leu Glu Val		
50	55	60
Pro Lys Ile Val Thr Gln Val Val Asn Gly Val Glu Leu Pro Gly Ser		
65	70	75
Ala Trp Lys Ala Tyr Ala Ser Ile Asp Leu Thr Ile Pro Ile Phe Ala		
	85	90
Ala Thr Asp Asp Val Thr Val Ile Ser Lys Ser Leu Ala Gly Leu Phe		
	100	105
Lys Val Gly Asn Pro Ile Ala Glu Ala Ile Ser Ser Gln Ser Gly Phe		
	115	120
Tyr Ala		
130		

<210> 163
 <211> 132
 <212> PRT
 <213> Bacteriophage SP

<400> 163

Met Ala Lys Leu Asn Gln Val Thr Leu Ser Lys Ile Gly Lys Asn Gly		
1	5	10
Asp Gln Thr Leu Thr Leu Thr Pro Arg Gly Val Asn Pro Thr Asn Gly		
	20	25
Val Ala Ser Leu Ser Glu Ala Gly Ala Val Pro Ala Leu Glu Lys Arg		
	35	40
Val Thr Val Ser Val Ala Gln Pro Ser Arg Asn Arg Lys Asn Phe Lys		
	50	55
Val Gln Ile Lys Leu Gln Asn Pro Thr Ala Cys Thr Arg Asp Ala Cys		
65	70	75
Asp Pro Ser Val Thr Arg Ser Ala Phe Ala Asp Val Thr Leu Ser Phe		
	85	90
Thr Ser Tyr Ser Thr Asp Glu Glu Arg Ala Leu Ile Arg Thr Glu Leu		
	100	105
Ala Ala Leu Leu Ala Asp Pro Leu Ile Val Asp Ala Ile Asp Asn Leu		
	115	120
Asn Pro Ala Tyr		
130		

<210> 164
 <211> 130
 <212> PRT
 <213> Bacteriophage MS2

<400> 164

Met Ala Ser Asn Phe Thr Gln Phe Val Leu Val Asp Asn Gly Gly Thr
1 5 10 15
Gly Asp Val Thr Val Ala Pro Ser Asn Phe Ala Asn Gly Val Ala Glu
20 25 30
Trp Ile Ser Ser Asn Ser Arg Ser Gln Ala Tyr Lys Val Thr Cys Ser
35 40 45
Val Arg Gln Ser Ser Ala Gln Asn Arg Lys Tyr Thr Ile Lys Val Glu
50 55 60
Val Pro Lys Val Ala Thr Gln Thr Val Gly Gly Val Glu Leu Pro Val
65 70 75 80
Ala Ala Trp Arg Ser Tyr Leu Asn Met Glu Leu Thr Ile Pro Ile Phe
85 90 95
Ala Thr Asn Ser Asp Cys Glu Leu Ile Val Lys Ala Met Gln Gly Leu
100 105 110
Leu Lys Asp Gly Asn Pro Ile Pro Ser Ala Ile Ala Ala Asn Ser Gly
115 120 125
Ile Tyr
130

<210> 165

<211> 133

<212> PRT

<213> Bacteriophage M11

<400> 165

Met Ala Lys Leu Gln Ala Ile Thr Leu Ser Gly Ile Gly Lys Lys Gly
1 5 10 15
Asp Val Thr Leu Asp Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly
20 25 30
Val Ala Ala Leu Ser Glu Ala Gly Ala Val Pro Ala Leu Glu Lys Arg
35 40 45
Val Thr Ile Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys
50 55 60
Val Gln Val Lys Ile Gln Asn Pro Thr Ser Cys Thr Ala Ser Gly Thr
65 70 75 80
Cys Asp Pro Ser Val Thr Arg Ser Ala Tyr Ser Asp Val Thr Phe Ser
85 90 95
Phe Thr Gln Tyr Ser Thr Val Glu Glu Arg Ala Leu Val Arg Thr Glu
100 105 110
Leu Gln Ala Leu Leu Ala Asp Pro Met Leu Val Asn Ala Ile Asp Asn
115 120 125

Leu Asn Pro Ala Tyr
130

<210> 166
<211> 133
<212> PRT
<213> Bacteriophage MX1

<400> 166
Met Ala Lys Leu Gln Ala Ile Thr Leu Ser Gly Ile Gly Lys Asn Gly
1 5 10 15
Asp Val Thr Leu Asn Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly
20 25 30
Val Ala Ala Leu Ser Glu Ala Gly Ala Val Pro Ala Leu Glu Lys Arg
35 40 45
Val Thr Ile Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys
50 55 60
Val Gln Val Lys Ile Gln Asn Pro Thr Ser Cys Thr Ala Ser Gly Thr
65 70 75 80
Cys Asp Pro Ser Val Thr Arg Ser Ala Tyr Ala Asp Val Thr Phe Ser
85 90 95
Phe Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Leu Val Arg Thr Glu
100 105 110
Leu Lys Ala Leu Leu Ala Asp Pro Met Leu Ile Asp Ala Ile Asp Asn
115 120 125
Leu Asn Pro Ala Tyr
130

<210> 167
<211> 330
<212> PRT
<213> Bacteriophage NL95

<400> 167
Met Ala Lys Leu Asn Lys Val Thr Leu Thr Gly Ile Gly Lys Ala Gly
1 5 10 15
Asn Gln Thr Leu Thr Leu Thr Pro Arg Gly Val Asn Pro Thr Asn Gly
20 25 30
Val Ala Ser Leu Ser Glu Ala Gly Ala Val Pro Ala Leu Glu Lys Arg
35 40 45
Val Thr Val Ser Val Ala Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys
50 55 60
Val Gln Ile Lys Leu Gln Asn Pro Thr Ala Cys Thr Lys Asp Ala Cys
65 70 75 80
Asp Pro Ser Val Thr Arg Ser Gly Ser Arg Asp Val Thr Leu Ser Phe

85					90					95					
Thr	Ser	Tyr	Ser	Thr	Glu	Arg	Glu	Arg	Ala	Leu	Ile	Arg	Thr	Glu	Leu
			100					105					110		
Ala	Ala	Leu	Leu	Lys	Asp	Asp	Leu	Ile	Val	Asp	Ala	Ile	Asp	Asn	Leu
		115					120					125			
Asn	Pro	Ala	Tyr	Trp	Ala	Ala	Leu	Leu	Ala	Ala	Ser	Pro	Gly	Gly	Gly
	130					135					140				
Asn	Asn	Pro	Tyr	Pro	Gly	Val	Pro	Asp	Ser	Pro	Asn	Val	Lys	Pro	Pro
	145					150					155				160
Gly	Gly	Thr	Gly	Thr	Tyr	Arg	Cys	Pro	Phe	Ala	Cys	Tyr	Arg	Arg	Gly
				165					170					175	
Glu	Leu	Ile	Thr	Glu	Ala	Lys	Asp	Gly	Ala	Cys	Ala	Leu	Tyr	Ala	Cys
			180					185					190		
Gly	Ser	Glu	Ala	Leu	Val	Glu	Phe	Glu	Tyr	Ala	Leu	Glu	Asp	Phe	Leu
		195					200					205			
Gly	Asn	Glu	Phe	Trp	Arg	Asn	Trp	Asp	Gly	Arg	Leu	Ser	Lys	Tyr	Asp
	210					215					220				
Ile	Glu	Thr	His	Arg	Arg	Cys	Arg	Gly	Asn	Gly	Tyr	Val	Asp	Leu	Asp
	225					230					235				240
Ala	Ser	Val	Met	Gln	Ser	Asp	Glu	Tyr	Val	Leu	Ser	Gly	Ala	Tyr	Asp
				245					250					255	
Val	Val	Lys	Met	Gln	Pro	Pro	Gly	Thr	Phe	Asp	Ser	Pro	Arg	Tyr	Tyr
			260					265					270		
Leu	His	Leu	Met	Asp	Gly	Ile	Tyr	Val	Asp	Leu	Ala	Glu	Val	Thr	Ala
		275					280					285			
Tyr	Arg	Ser	Tyr	Gly	Met	Val	Ile	Gly	Phe	Trp	Thr	Asp	Ser	Lys	Ser
	290					295					300				
Pro	Gln	Leu	Pro	Thr	Asp	Phe	Thr	Arg	Phe	Asn	Arg	His	Asn	Cys	Pro
	305					310					315				320
Val	Gln	Thr	Val	Ile	Val	Ile	Pro	Ser	Leu						
				325					330						

<210> 168

<211> 134

<212> PRT

<213> Apis mellifera

<400> 168

Ile	Ile	Tyr	Pro	Gly	Thr	Leu	Trp	Cys	Gly	His	Gly	Asn	Lys	Ser	Ser
1				5					10					15	

Gly	Pro	Asn	Glu	Leu	Gly	Arg	Phe	Lys	His	Thr	Asp	Ala	Cys	Cys	Arg
		20						25					30		

Thr His Asp Met Cys Pro Asp Val Met Ser Ala Gly Glu Ser Lys His

35	40	45
Gly Leu Thr Asn Thr Ala Ser His Thr Arg Leu Ser Cys Asp Cys Asp		
50	55	60
Asp Lys Phe Tyr Asp Cys Leu Lys Asn Ser Ala Asp Thr Ile Ser Ser		
65	70	75
Tyr Phe Val Gly Lys Met Tyr Phe Asn Leu Ile Asp Thr Lys Cys Tyr		
	85	90
Lys Leu Glu His Pro Val Thr Gly Cys Gly Glu Arg Thr Glu Gly Arg		
	100	105
Cys Leu His Tyr Thr Val Asp Lys Ser Lys Pro Lys Val Tyr Gln Trp		
	115	120
Phe Asp Leu Arg Lys Tyr		
130		

<210> 169
 <211> 129
 <212> PRT
 <213> Apis mellifera

<400> 169
Ile Ile Tyr Pro Gly Thr Leu Trp Cys Gly His Gly Asn Lys Ser Ser
1 5 10 15
Gly Pro Asn Glu Leu Gly Arg Phe Lys His Thr Asp Ala Cys Cys Arg
20 25 30
Thr His Asp Met Cys Pro Asn Val Met Ser Ala Gly Glu Ser Lys His
35 40 45
Gly Leu Thr Asp Thr Ala Ser Arg Leu Ser Cys Asn Asp Asn Asp Leu
50 55 60
Phe Tyr Lys Asp Ser Ala Asp Thr Ile Ser Ser Tyr Phe Val Gly Lys
65 70 75 80
Met Tyr Phe Asn Leu Ile Asn Thr Lys Cys Tyr Lys Leu Glu His Pro
85 90 95
Val Thr Gly Cys Gly Glu Arg Thr Glu Gly Arg Cys Leu His Tyr Thr
100 105 110
Val Asp Lys Ser Lys Pro Lys Val Tyr Gln Trp Phe Asp Leu Arg Lys
115 120 125
Tyr

<210> 170
 <211> 134
 <212> PRT
 <213> Apis dorsata

<400> 170
 Ile Ile Tyr Pro Gly Thr Leu Trp Cys Gly His Gly Asn Val Ser Ser

1	5	10	15
Ser Pro Asp Glu Leu Gly Arg Phe Lys His Thr Asp Ser Cys Cys Arg	20	25	30
Ser His Asp Met Cys Pro Asp Val Met Ser Ala Gly Glu Ser Lys His	35	40	45
Gly Leu Thr Asn Thr Ala Ser His Thr Arg Leu Ser Cys Asp Cys Asp	50	55	60
Asp Lys Phe Tyr Asp Cys Leu Lys Asn Ser Ser Asp Thr Ile Ser Ser	65	70	75
Tyr Phe Val Gly Glu Met Tyr Phe Asn Ile Leu Asp Thr Lys Cys Tyr	85	90	95
Lys Leu Glu His Pro Val Thr Gly Cys Gly Lys Arg Thr Glu Gly Arg	100	105	110
Cys Leu Asn Tyr Thr Val Asp Lys Ser Lys Pro Lys Val Tyr Gln Trp	115	120	125
Phe Asp Leu Arg Lys Tyr	130		

<210> 171
 <211> 134
 <212> PRT
 <213> Apis cerana

<400> 171
Ile Ile Tyr Pro Gly Thr Leu Trp Cys Gly His Gly Asn Val Ser Ser
1 5 10 15
Gly Pro Asn Glu Leu Gly Arg Phe Lys His Thr Asp Ala Cys Cys Arg
20 25 30
Thr His Asp Met Cys Pro Asp Val Met Ser Ala Gly Glu Ser Lys His
35 40 45
Gly Leu Thr Asn Thr Ala Ser His Thr Arg Leu Ser Cys Asp Cys Asp
50 55 60
Asp Thr Phe Tyr Asp Cys Leu Lys Asn Ser Gly Glu Lys Ile Ser Ser
65 70 75 80
Tyr Phe Val Gly Lys Met Tyr Phe Asn Leu Ile Asp Thr Lys Cys Tyr
85 90 95
Lys Leu Glu His Pro Val Thr Gly Cys Gly Glu Arg Thr Glu Gly Arg
100 105 110
Cys Leu Arg Tyr Thr Val Asp Lys Ser Lys Pro Lys Val Tyr Gln Trp
115 120 125
Phe Asp Leu Arg Lys Tyr
130

<210> 172
<211> 136
<212> PRT
<213> *Bombus pennsylvanicus*

<400> 172
Ile Ile Tyr Pro Gly Thr Leu Trp Cys Gly Asn Gly Asn Ile Ala Asn
1 5 10 15
Gly Thr Asn Glu Leu Gly Leu Trp Lys Glu Thr Asp Ala Cys Cys Arg
20 25 30
Thr His Asp Met Cys Pro Asp Ile Ile Glu Ala His Gly Ser Lys His
35 40 45
Gly Leu Thr Asn Pro Ala Asp Tyr Thr Arg Leu Asn Cys Glu Cys Asp
50 55 60
Glu Glu Phe Arg His Cys Leu His Asn Ser Gly Asp Ala Val Ser Ala
65 70 75 80
Ala Phe Val Gly Arg Thr Tyr Phe Thr Ile Leu Gly Thr Gln Cys Phe
85 90 95
Arg Leu Asp Tyr Pro Ile Val Lys Cys Lys Val Lys Ser Thr Ile Leu
100 105 110
Arg Glu Cys Lys Glu Tyr Glu Phe Asp Thr Asn Ala Pro Gln Lys Tyr
115 120 125
Gln Trp Phe Asp Val Leu Ser Tyr
130 135

<210> 173
<211> 142
<212> PRT
<213> *Heloderma suspectum*

<400> 173
Gly Ala Phe Ile Met Pro Gly Thr Leu Trp Cys Gly Ala Gly Asn Ala
1 5 10 15
Ala Ser Asp Tyr Ser Gln Leu Gly Thr Glu Lys Asp Thr Asp Met Cys
20 25 30
Cys Arg Asp His Asp His Cys Ser Asp Thr Met Ala Ala Leu Glu Tyr
35 40 45
Lys His Gly Met Arg Asn Tyr Arg Pro His Thr Val Ser His Cys Asp
50 55 60
Cys Asp Asn Gln Phe Arg Ser Cys Leu Met Asn Val Lys Asp Arg Thr
65 70 75 80
Ala Asp Leu Val Gly Met Thr Tyr Phe Thr Val Leu Lys Ile Ser Cys
85 90 95
Phe Glu Leu Glu Glu Gly Glu Gly Cys Val Asp Asn Asn Phe Ser Gln
100 105 110

Gln Cys Thr Lys Ser Glu Ile Met Pro Val Ala Lys Leu Val Ser Ala
115 120 125

Ala Pro Tyr Gln Ala Gln Ala Glu Thr Gln Ser Gly Glu Gly
130 135 140

<210> 174

<211> 143

<212> PRT

<213> Heloderma suspectum

<400> 174

Gly Ala Phe Ile Met Pro Gly Thr Leu Trp Cys Gly Ala Gly Asn Ala
1 5 10 15

Ala Ser Asp Tyr Ser Gln Leu Gly Thr Glu Lys Asp Thr Asp Met Cys
20 25 30

Cys Arg Asp His Asp His Cys Glu Asn Trp Ile Ser Ala Leu Glu Tyr
35 40 45

Lys His Gly Met Arg Asn Tyr Tyr Pro Ser Thr Ile Ser His Cys Asp
50 55 60

Cys Asp Asn Gln Phe Arg Ser Cys Leu Met Lys Leu Lys Asp Gly Thr
65 70 75 80

Ala Asp Tyr Val Gly Gln Thr Tyr Phe Asn Val Leu Lys Ile Pro Cys
85 90 95

Phe Glu Leu Glu Glu Gly Glu Gly Cys Val Asp Trp Asn Phe Trp Leu
100 105 110

Glu Cys Thr Glu Ser Lys Ile Met Pro Val Ala Lys Leu Val Ser Ala
115 120 125

Ala Pro Tyr Gln Ala Gln Ala Glu Thr Gln Ser Gly Glu Gly Arg
130 135 140

<210> 175

<211> 142

<212> PRT

<213> Heloderma suspectum

<400> 175

Gly Ala Phe Ile Met Pro Gly Thr Leu Trp Cys Gly Ala Gly Asn Ala
1 5 10 15

Ala Ser Asp Tyr Ser Gln Leu Gly Thr Glu Lys Asp Thr Asp Met Cys
20 25 30

Cys Arg Asp His Asp His Cys Glu Asn Trp Ile Ser Ala Leu Glu Tyr
35 40 45

Lys His Gly Met Arg Asn Tyr Tyr Pro Ser Thr Ile Ser His Cys Asp
50 55 60

Cys Asp Asn Gln Phe Arg Ser Cys Leu Met Lys Leu Lys Asp Gly Thr

65		70		75		80									
Ala	Asp	Tyr	Val	Gly	Gln	Thr	Tyr	Phe	Asn	Val	Leu	Lys	Ile	Pro	Cys
			85					90						95	
Phe	Glu	Leu	Glu	Glu	Gly	Glu	Gly	Cys	Val	Asp	Trp	Asn	Phe	Trp	Leu
		100						105					110		
Glu	Cys	Thr	Glu	Ser	Lys	Ile	Met	Pro	Val	Ala	Lys	Leu	Val	Ser	Ala
		115					120					125			

Ala	Pro	Tyr	Gln	Ala	Gln	Ala	Glu	Thr	Gln	Ser	Gly	Glu	Gly
	130					135					140		

<210> 176
 <211> 574
 <212> PRT
 <213> IgE heavy chain

<400> 176

Met	Asp	Trp	Thr	Trp	Ile	Leu	Phe	Leu	Val	Ala	Ala	Ala	Thr	Arg	Val
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His	Ser	Gln	Thr	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Arg	Lys	Pro
		20					25						30		
Gly	Ala	Ser	Val	Arg	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Ile
		35					40					45			
Asp	Ser	Tyr	Ile	His	Trp	Ile	Arg	Gln	Ala	Pro	Gly	His	Gly	Leu	Glu
	50				55						60				
Trp	Val	Gly	Trp	Ile	Asn	Pro	Asn	Ser	Gly	Gly	Thr	Asn	Tyr	Ala	Pro
65					70				75					80	
Arg	Phe	Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Ala	Ser	Phe	Ser	Thr
			85						90					95	
Ala	Tyr	Met	Asp	Leu	Arg	Ser	Leu	Arg	Ser	Asp	Asp	Ser	Ala	Val	Phe
		100					105						110		
Tyr	Cys	Ala	Lys	Ser	Asp	Pro	Phe	Trp	Ser	Asp	Tyr	Tyr	Asn	Phe	Asp
		115					120				125				
Tyr	Ser	Tyr	Thr	Leu	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Val	Thr	Val
	130					135					140				
Ser	Ser	Ala	Ser	Thr	Gln	Ser	Pro	Ser	Val	Phe	Pro	Leu	Thr	Arg	Cys
	145				150					155					160
Cys	Lys	Asn	Ile	Pro	Ser	Asn	Ala	Thr	Ser	Val	Thr	Leu	Gly	Cys	Leu
		165						170						175	
Ala	Thr	Gly	Tyr	Phe	Pro	Glu	Pro	Val	Met	Val	Thr	Trp	Asp	Thr	Gly
		180						185					190		

Ser	Leu	Asn	Gly	Thr	Thr	Met	Thr	Leu	Pro	Ala	Thr	Thr	Leu	Thr	Leu		
		195					200					205					
Ser	Gly	His	Tyr	Ala	Thr	Ile	Ser	Leu	Leu	Thr	Val	Ser	Gly	Ala	Trp		
	210					215					220						
Ala	Lys	Gln	Met	Phe	Thr	Cys	Arg	Val	Ala	His	Thr	Pro	Ser	Ser	Thr		
225					230					235					240		
Asp	Trp	Val	Asp	Asn	Lys	Thr	Phe	Ser	Val	Cys	Ser	Arg	Asp	Phe	Thr		
				245					250					255			
Pro	Pro	Thr	Val	Lys	Ile	Leu	Gln	Ser	Ser	Cys	Asp	Gly	Gly	Gly	His		
			260					265					270				
Phe	Pro	Pro	Thr	Ile	Gln	Leu	Leu	Cys	Leu	Val	Ser	Gly	Tyr	Thr	Pro		
		275					280					285					
Gly	Thr	Ile	Asn	Ile	Thr	Trp	Leu	Glu	Asp	Gly	Gln	Val	Met	Asp	Val		
	290					295					300						
Asp	Leu	Ser	Thr	Ala	Ser	Thr	Thr	Gln	Glu	Gly	Glu	Leu	Ala	Ser	Thr		
305					310					315					320		
Gln	Ser	Glu	Leu	Thr	Leu	Ser	Gln	Lys	His	Trp	Leu	Ser	Asp	Arg	Thr		
				325					330					335			
Tyr	Thr	Cys	Gln	Val	Thr	Tyr	Gln	Gly	His	Thr	Phe	Glu	Asp	Ser	Thr		
			340					345					350				
Lys	Lys	Cys	Ala	Asp	Ser	Asn	Pro	Arg	Gly	Val	Ser	Ala	Tyr	Leu	Ser		
		355					360					365					
Arg	Pro	Ser	Pro	Phe	Asp	Leu	Phe	Ile	Arg	Lys	Ser	Pro	Thr	Ile	Thr		
		370				375					380						
Cys	Leu	Val	Val	Asp	Leu	Ala	Pro	Ser	Lys	Gly	Thr	Val	Asn	Leu	Thr		
385					390					395					400		
Trp	Ser	Arg	Ala	Ser	Gly	Lys	Pro	Val	Asn	His	Ser	Thr	Arg	Lys	Glu		
				405					410					415			
Glu	Lys	Gln	Arg	Asn	Gly	Thr	Leu	Thr	Val	Thr	Ser	Thr	Leu	Pro	Val		
			420					425					430				
Gly	Thr	Arg	Asp	Trp	Ile	Glu	Gly	Glu	Thr	Tyr	Gln	Cys	Arg	Val	Thr		
		435					440					445					
His	Pro	His	Leu	Pro	Arg	Ala	Leu	Met	Arg	Ser	Thr	Thr	Lys	Thr	Ser		
		450				455					460						
Gly	Pro	Arg	Ala	Ala	Pro	Glu	Val	Tyr	Ala	Phe	Ala	Thr	Pro	Glu	Trp		
465					470					475					480		
Pro	Gly	Ser	Arg	Asp	Lys	Arg	Thr	Leu	Ala	Cys	Leu	Ile	Gln	Asn	Phe		
				485					490					495			
Met	Pro	Glu	Asp	Ile	Ser	Val	Gln	Trp	Leu	His	Asn	Glu	Val	Gln	Leu		
			500					505					510				

Pro Asp Ala Arg His Ser Thr Thr Gln Pro Arg Lys Thr Lys Gly Ser
515 520 525

Gly Phe Phe Val Phe Ser Arg Leu Glu Val Thr Arg Ala Glu Trp Glu
530 535 540

Gln Lys Asp Glu Phe Ile Cys Arg Ala Val His Glu Ala Ala Ser Pro
545 550 555 560

Ser Gln Thr Val Gln Arg Ala Val Ser Val Asn Pro Gly Lys
565 570

<210> 177

<400> 177
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<210> 178
<211> 13
<212> PRT
<213> IgE Peptides

<400> 178
Cys Gly Gly Val Asn Leu Thr Trp Ser Arg Ala Ser Gly
1 5 10

<210> 179
<211> 8
<212> PRT
<213> IgE Mimotype

<400> 179
Ile Asn His Arg Gly Tyr Trp Val
1 5

<210> 180
<211> 8
<212> PRT
<213> IgE Mimotype

<400> 180
Arg Asn His Arg Gly Tyr Trp Val
1 5

<210> 181
<211> 10
<212> PRT
<213> IgE Mimotype

<400> 181
Arg Ser Arg Ser Gly Gly Tyr Trp Leu Trp
1 5 10

<210> 182
<211> 10
<212> PRT
<213> IgE Mimotype

<400> 182
Val Asn Leu Thr Trp Ser Arg Ala Ser Gly
1 5 10

<210> 183
<211> 10
<212> PRT
<213> IgE Mimotype

<400> 183
Val Asn Leu Pro Trp Ser Arg Ala Ser Gly
1 5 10

<210> 184
<211> 10
<212> PRT
<213> IgE Mimotype

<400> 184
Val Asn Leu Thr Trp Ser Phe Gly Leu Glu
1 5 10

<210> 185
<211> 10
<212> PRT
<213> IgE Mimotype

<400> 185
Val Asn Leu Pro Trp Ser Phe Gly Leu Glu
1 5 10

<210> 186
<211> 10
<212> PRT
<213> IgE Mimotype

<400> 186
Val Asn Arg Pro Trp Ser Phe Gly Leu Glu
1 5 10

<210> 187
<211> 10
<212> PRT
<213> IgE Mimotype

<400> 187
Val Lys Leu Pro Trp Arg Phe Tyr Gln Val
1 5 10

<210> 188
<211> 10
<212> PRT
<213> IgE Mimotype

<400> 188

Val Trp Thr Ala Cys Gly Tyr Gly Arg Met
1 5 10

<210> 189
<211> 7
<212> PRT
<213> IgE Mimotype

<400> 189

Gly Thr Val Ser Thr Leu Ser
1 5

<210> 190
<211> 7
<212> PRT
<213> IgE Mimotype

<400> 190

Leu Leu Asp Ser Arg Tyr Trp
1 5

<210> 191
<211> 7
<212> PRT
<213> IgE Mimotype

<400> 191

Gln Pro Ala His Ser Leu Gly
1 5

<210> 192
<211> 7
<212> PRT
<213> IgE Mimotype

<400> 192

Leu Trp Gly Met Gln Gly Arg
1 5

<210> 193
<211> 15
<212> PRT
<213> IgE Mimotype

<400> 193

Leu Thr Leu Ser His Pro His Trp Val Leu Asn His Phe Val Ser
1 5 10 15

<210> 194
<211> 9
<212> PRT
<213> IgE Mimotype

<400> 194
Ser Met Gly Pro Asp Gln Thr Leu Arg
1 5

<210> 195
<211> 6
<212> PRT
<213> IgE Mimotype

<400> 195
Val Asn Leu Thr Trp Ser
1 5

<210> 196
<211> 56
<212> DNA
<213> Oligonucleotide Primer

<400> 196
tagatgatta cgccaagctt ataatagaaa tagttttttg aaaggaaagc agcatg 56

<210> 197
<211> 45
<212> DNA
<213> Oligonucleotide Primer

<400> 197
gtcaaaggcc ttgtcgacgt tattccatta cgcccgatcat tttgg 45

<210> 198
<211> 4623
<212> DNA
<213> pFIMAIC

<400> 198
agacgaaagg gcctcgtgat acgcctatTT ttataggTTa atgtcatgat aataatggTT 60
tcttagacgt caggtggcac ttttcgggga aatgtgCGcg gaaccctat ttgtttatTT 120
ttctaaatac attcaaatat gtatccgctc atgagacaat aaccctgata aatgcttcaa 180
taatattgaa aaaggaagag tatgagtatt caacatttcc gtgtcgccct tattccctTT 240
tttgcgggcat tttgccttcc tgtttttgct caccagaaa cgctgggtgaa agtaaaagat 300
gctgaagatc agttgggtgc acgagtgggt tacatcgaac tggatctcaa cagcggtaag 360
atccttgaga gttttcgccc cgaagaacgt tttccaatga tgagcacttt taaagttctg 420
ctatgtggcg cggtattatc ccgtattgac gccgggcaag agcaactcgg tcgccgcata 480
cactattctc agaatgactt gggttgagtac tcaccagtca cagaaaagca tcttacggat 540

ggcatgacag taagagaatt atgcagtgct gccataacca tgagtataa cactgcgggc	600
aacttacttc tgacaacgat cggaggaccg aaggagctaa ccgctttttt gcacaacatg	660
ggggatcatg taactcgcct tgatcgttgg gaaccggagc tgaatgaagc cataccaaac	720
gacgagcgtg acaccacgat gcctgtagca atggcaacaa cggtgcgcaa actattaact	780
ggcgaactac ttactctagc ttcccggcaa caattaatag actggatgga ggcggataaa	840
gttgcaggac cacttctgcg ctcgccctt cgggctggct ggtttattgc tgataaatct	900
ggagccggtg agcgtgggtc tcgcggtatc attgcagcac tggggccaga tggtaagccc	960
tcccgatcgc tagttatcta cagcagggg agtcaggcaa ctatggatga acgaaataga	1020
cagatcgcgc agataggtgc ctactgatt aagcattggc aactgtcaga ccaagtttac	1080
tcatatatac tttagattga tttaaaactt cttttttaat ttaaaggat ctaggtgaag	1140
atcctttttg ataattctcat gaccaaatac ccttaacgtg agttttcgtt cactgagcg	1200
tcagaccccg tagaaaagat caaaggatct tcttgagatc ctttttttct gcgcgtaatc	1260
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cttctagtgt agccgtagtt aggccaccac ttcaagaact ctgtagcacc gcctacatac	1440
ctcgcctcgc taatcctgtt accagtggct gctgccagtg gcgataagtc gtgtcttacc	1500
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tcgtgcacac agcccagctt ggagcgaacg acctacaccg aactgagata cctacagcgt	1620
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ggggggcgga gcctatggaa aaacgccagc aacgcggcct ttttacgggt cctggccttt	1860
tgctggcctt ttgctcacat gttctttcct gcgttatccc ctgattctgt ggataaccgt	1920
attaccgcct ttgagtgagc tgataccgct cgccgcagcc gaacgaccga gcgcagcgag	1980
tcagtgagcg aggaagcgga agagcgccca atacgcaaac cgctctccc cgcgcggttg	2040
ccgattcatt aatgcagctg gcacgacagg tttcccgact ggaaagcggg cagtgagcgc	2100
aacgcaatta atgtgagtta gctcactcat taggcacccc aggcctttaca ctttatgctt	2160
ccggctcgta tggtgtgtgg aattgtgagc ggataacaat ttcacacagg aaacagctat	2220
gaccatgatt acgccaagct tataatagaa atagtttttt gaaaggaaag cagcatgaaa	2280
attaaaactc tggcaatcgt tgttctgtcg gctctgtccc tcagttctac agcggctctg	2340

gccgctgcca cgacgggttaa tggtagggacc gttcacttta aaggggaagt tgttaacgcc	2400
gcttgcgag ttgatgcagg ctctgttgat caaacggttc agttaggaca ggttcgtacc	2460
gcatcgctgg cacaggaagg agcaaccagt tctgctgtcg gttttaacat tcagctgaat	2520
gattgcgata ccaatgttgc atctaaagcc gctgttgcc ttttaggtac ggcgattgat	2580
gcgggtcata ccaacgttct ggctctgcag agttcagctg cgggtagcgc aacaaacgtt	2640
ggtgtgcaga tcctggacag aacgggtgct gcgctgacgc tggatggtgc gacatttagt	2700
tcagaaacaa ccctgaataa cggaaccaat accattccgt tccaggcgcg ttattttgca	2760
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taacctacc aggttcagg acgtcattac gggcagggat gccaccctt gtgcgataaa	2880
aataacgatg aaaaggaaga gattatttct attagcgctg ttgctgcaa tgtttgctct	2940
ggccggaaat aaatggaata ccacgttgcc cggcggaaat atgcaatttc agggcgctcat	3000
tattgcggaa acttgccgga ttgaagccgg tgataaacia atgacggtca atatggggca	3060
aatcagcagt aaccggtttc atgcgggttg ggaagatagc gcaccggtgc cttttgttat	3120
tcatttacgg gaatgtagca cggtagtgag tgaacgtgta ggtgtggcgt ttcacggtgt	3180
cgcggtggt aaaaatccgg atgtgctttc cgtgggagag gggccaggga tagccaccaa	3240
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<210> 207
<211> 13
<212> PRT
<213> Ce3epitope

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<400> 207
Cys Gly Gly Val Asn Leu Thr Trp Ser Arg Ala Ser Gly
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<210> 208
<211> 13
<212> PRT
<213> Ce3mimotope

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<400> 208
Cys Gly Gly Val Asn Leu Pro Trp Ser Phe Gly Leu Glu
1 5 10

<210> 209
<211> 9
<212> PRT
<213> Bee venom phospholipase A2 cloning vector

<400> 209
Ala Ala Ala Ser Gly Gly Cys Gly Gly
1 5

<210> 210
<211> 145
<212> PRT
<213> PLA2 fusion protein

<400> 210
Met Ala Ile Ile Tyr Pro Gly Thr Leu Trp Cys Gly His Gly Asn Lys
1 5 10 15
Ser Ser Gly Pro Asn Glu Leu Gly Arg Phe Lys His Thr Asp Ala Cys
20 25 30
Cys Arg Thr Gln Asp Met Cys Pro Asp Val Met Ser Ala Gly Glu Ser
35 40 45
Lys His Gly Leu Thr Asn Thr Ala Ser His Thr Arg Leu Ser Cys Asp
50 55 60
Cys Asp Asp Lys Phe Tyr Asp Cys Leu Lys Asn Ser Ala Asp Thr Ile
65 70 75 80
Ser Ser Tyr Phe Val Gly Lys Met Tyr Phe Asn Leu Ile Asp Thr Lys
85 90 95
Cys Tyr Lys Leu Glu His Pro Val Thr Gly Cys Gly Glu Arg Thr Glu
100 105 110
Gly Arg Cys Leu His Tyr Thr Val Asp Lys Ser Lys Pro Lys Val Tyr
115 120 125
Gln Trp Phe Asp Leu Arg Lys Tyr Ala Ala Ala Ser Gly Gly Cys Gly
130 135 140

Gly
145

<210> 211
<211> 17
<212> PRT
<213> Ce4mimotope

<400> 211
Gly Glu Phe Cys Ile Asn His Arg Gly Tyr Trp Val Cys Gly Asp Pro
1 5 10 15

Ala

<210> 212
 <211> 27
 <212> PRT
 <213> Synthetic M2 Peptide

<400> 212
 Ser Leu Leu Thr Glu Val Glu Thr Pro Ile Arg Asn Glu Trp Gly Cys
 1 5 10 15
 Arg Cys Asn Gly Ser Ser Asp Gly Gly Gly Cys
 20 25

<210> 213
 <211> 97
 <212> PRT
 <213> Matrix protein M2

<400> 213
 Met Ser Leu Leu Thr Glu Val Glu Thr Pro Ile Arg Asn Glu Trp Gly
 1 5 10 15
 Cys Arg Cys Asn Gly Ser Ser Asp Pro Leu Ala Ile Ala Ala Asn Ile
 20 25 30
 Ile Gly Ile Leu His Leu Ile Leu Trp Ile Leu Asp Arg Leu Phe Phe
 35 40 45
 Lys Cys Ile Tyr Arg Arg Phe Lys Tyr Gly Leu Lys Gly Gly Pro Ser
 50 55 60
 Thr Glu Gly Val Pro Lys Ser Met Arg Glu Glu Tyr Arg Lys Glu Gln
 65 70 75 80
 Gln Ser Ala Val Asp Ala Asp Asp Gly His Phe Val Ser Ile Glu Leu
 85 90 95
 Glu

<210> 214
 <211> 42
 <212> DNA
 <213> Oligonucleotide

<400> 214
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42

<210> 215
 <211> 129
 <212> PRT
 <213> Bacteriophage f2

<400> 215

Ala	Ser	Asn	Phe	Thr	Gln	Phe	Val	Leu	Val	Asn	Asp	Gly	Gly	Thr	Gly
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Asn	Val	Thr	Val	Ala	Pro	Ser	Asn	Phe	Ala	Asn	Gly	Val	Ala	Glu	Trp
			20					25					30		
Ile	Ser	Ser	Asn	Ser	Arg	Ser	Gln	Ala	Tyr	Lys	Val	Thr	Cys	Ser	Val
		35					40					45			
Arg	Gln	Ser	Ser	Ala	Gln	Asn	Arg	Lys	Tyr	Thr	Ile	Lys	Val	Glu	Val
	50					55					60				
Pro	Lys	Val	Ala	Thr	Gln	Thr	Val	Gly	Gly	Val	Glu	Leu	Pro	Val	Ala
65					70					75					80
Ala	Trp	Arg	Ser	Tyr	Leu	Asn	Leu	Glu	Leu	Thr	Ile	Pro	Ile	Phe	Ala
				85					90					95	
Thr	Asn	Ser	Asp	Cys	Glu	Leu	Ile	Val	Lys	Ala	Met	Gln	Gly	Leu	Leu
			100					105					110		
Lys	Asp	Gly	Asn	Pro	Ile	Pro	Ser	Ala	Ile	Ala	Ala	Asn	Ser	Gly	Ile
		115					120					125			

Tyr

<210> 216
 <211> 17
 <212> PRT
 <213> Circular Mimotope

<400> 216

Gly	Glu	Phe	Cys	Ile	Asn	His	Arg	Gly	Tyr	Trp	Val	Cys	Gly	Asp	Pro
1				5					10					15	

Ala

<210> 217
 <211> 329
 <212> PRT
 <213> Bacteriophage Q-beta

<400> 217

Met	Ala	Lys	Leu	Glu	Thr	Val	Thr	Leu	Gly	Asn	Ile	Gly	Lys	Asp	Gly
1				5					10					15	
Lys	Gln	Thr	Leu	Val	Leu	Asn	Pro	Arg	Gly	Val	Asn	Pro	Thr	Asn	Gly
			20					25					30		
Val	Ala	Ser	Leu	Ser	Gln	Ala	Gly	Ala	Val	Pro	Ala	Leu	Glu	Lys	Arg
		35					40					45			
Val	Thr	Val	Ser	Val	Ser	Gln	Pro	Ser	Arg	Asn	Arg	Lys	Asn	Tyr	Lys
	50					55					60				
Val	Gln	Val	Lys	Ile	Gln	Asn	Pro	Thr	Ala	Cys	Thr	Ala	Asn	Gly	Ser

65	70	75	80
Cys Asp Pro Ser Val Thr Arg Gln Ala Tyr Ala Asp Val Thr Phe Ser	85	90	95
Phe Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu	100	105	110
Leu Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln	115	120	125
Leu Asn Pro Ala Tyr Trp Thr Leu Leu Ile Ala Gly Gly Gly Ser Gly	130	135	140
Ser Lys Pro Asp Pro Val Ile Pro Asp Pro Pro Ile Asp Pro Pro Pro	145	150	155
Gly Thr Gly Lys Tyr Thr Cys Pro Phe Ala Ile Trp Ser Leu Glu Glu	165	170	175
Val Tyr Glu Pro Pro Thr Lys Asn Arg Pro Trp Pro Ile Tyr Asn Ala	180	185	190
Val Glu Leu Gln Pro Arg Glu Phe Asp Val Ala Leu Lys Asp Leu Leu	195	200	205
Gly Asn Thr Lys Trp Arg Asp Trp Asp Ser Arg Leu Ser Tyr Thr Thr	210	215	220
Phe Arg Gly Cys Arg Gly Asn Gly Tyr Ile Asp Leu Asp Ala Thr Tyr	225	230	235
Leu Ala Thr Asp Gln Ala Met Arg Asp Gln Lys Tyr Asp Ile Arg Glu	245	250	255
Gly Lys Lys Pro Gly Ala Phe Gly Asn Ile Glu Arg Phe Ile Tyr Leu	260	265	270
Lys Ser Ile Asn Ala Tyr Cys Ser Leu Ser Asp Ile Ala Ala Tyr His	275	280	285
Ala Asp Gly Val Ile Val Gly Phe Trp Arg Asp Pro Ser Ser Gly Gly	290	295	300
Ala Ile Pro Phe Asp Phe Thr Lys Phe Asp Lys Thr Lys Cys Pro Ile	305	310	315
Gln Ala Val Ile Val Val Pro Arg Ala	325		

<210> 218

<211> 770

<212> PRT

<213> Amyloid-Beta Protein (Homo Sapiens)

<400> 218

Met Leu Pro Gly Leu Ala Leu Leu Leu Leu Ala Ala Trp Thr Ala Arg	1	5	10	15
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Ala Leu Glu Val Pro Thr Asp Gly Asn Ala Gly Leu Leu Ala Glu Pro
20 25 30

Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
35 40 45

Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
50 55 60

Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
65 70 75 80

Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
85 90 95

Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
100 105 110

Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
115 120 125

Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
130 135 140

Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
145 150 155 160

Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
165 170 175

Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
180 185 190

Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
195 200 205

Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
210 215 220

Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240

Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255

Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270

Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

Glu Val Cys Ser Glu Gln Ala Glu Thr Gly Pro Cys Arg Ala Met Ile
290 295 300

Ser Arg Trp Tyr Phe Asp Val Thr Glu Gly Lys Cys Ala Pro Phe Phe
305 310 315 320

Tyr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Asp Thr Glu Glu Tyr
325 330 335

Cys Met Ala Val Cys Gly Ser Ala Met Ser Gln Ser Leu Leu Lys Thr

340					345					350					
Thr	Gln	Glu	Pro	Leu	Ala	Arg	Asp	Pro	Val	Lys	Leu	Pro	Thr	Thr	Ala
		355					360					365			
Ala	Ser	Thr	Pro	Asp	Ala	Val	Asp	Lys	Tyr	Leu	Glu	Thr	Pro	Gly	Asp
	370					375					380				
Glu	Asn	Glu	His	Ala	His	Phe	Gln	Lys	Ala	Lys	Glu	Arg	Leu	Glu	Ala
385					390					395					400
Lys	His	Arg	Glu	Arg	Met	Ser	Gln	Val	Met	Arg	Glu	Trp	Glu	Glu	Ala
				405					410					415	
Glu	Arg	Gln	Ala	Lys	Asn	Leu	Pro	Lys	Ala	Asp	Lys	Lys	Ala	Val	Ile
			420					425					430		
Gln	His	Phe	Gln	Glu	Lys	Val	Glu	Ser	Leu	Glu	Gln	Glu	Ala	Ala	Asn
		435					440					445			
Glu	Arg	Gln	Gln	Leu	Val	Glu	Thr	His	Met	Ala	Arg	Val	Glu	Ala	Met
	450					455					460				
Leu	Asn	Asp	Arg	Arg	Arg	Leu	Ala	Leu	Glu	Asn	Tyr	Ile	Thr	Ala	Leu
465					470					475					480
Gln	Ala	Val	Pro	Pro	Arg	Pro	Arg	His	Val	Phe	Asn	Met	Leu	Lys	Lys
				485					490					495	
Tyr	Val	Arg	Ala	Glu	Gln	Lys	Asp	Arg	Gln	His	Thr	Leu	Lys	His	Phe
			500					505					510		
Glu	His	Val	Arg	Met	Val	Asp	Pro	Lys	Lys	Ala	Ala	Gln	Ile	Arg	Ser
		515					520					525			
Gln	Val	Met	Thr	His	Leu	Arg	Val	Ile	Tyr	Glu	Arg	Met	Asn	Gln	Ser
	530					535					540				
Leu	Ser	Leu	Leu	Tyr	Asn	Val	Pro	Ala	Val	Ala	Glu	Glu	Ile	Gln	Asp
545					550					555					560
Glu	Val	Asp	Glu	Leu	Leu	Gln	Lys	Glu	Gln	Asn	Tyr	Ser	Asp	Asp	Val
				565					570					575	
Leu	Ala	Asn	Met	Ile	Ser	Glu	Pro	Arg	Ile	Ser	Tyr	Gly	Asn	Asp	Ala
			580					585					590		
Leu	Met	Pro	Ser	Leu	Thr	Glu	Thr	Lys	Thr	Thr	Val	Glu	Leu	Leu	Pro
		595					600					605			
Val	Asn	Gly	Glu	Phe	Ser	Leu	Asp	Asp	Leu	Gln	Pro	Trp	His	Ser	Phe
	610					615					620				
Gly	Ala	Asp	Ser	Val	Pro	Ala	Asn	Thr	Glu	Asn	Glu	Val	Glu	Pro	Val
625						630					635				640
Asp	Ala	Arg	Pro	Ala	Ala	Asp	Arg	Gly	Leu	Thr	Thr	Arg	Pro	Gly	Ser
				645					650					655	
Gly	Leu	Thr	Asn	Ile	Lys	Thr	Glu	Glu	Ile	Ser	Glu	Val	Lys	Met	Asp
			660					665					670		

Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys Leu
675 680 685

Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile Gly
690 695 700

Leu Met Val Gly Gly Val Val Ile Ala Thr Val Ile Val Ile Thr Leu
705 710 715 720

Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile His His Gly Val Val
725 730 735

Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg His Leu Ser Lys Met
740 745 750

Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys Phe Phe Glu Gln Met
755 760 765

Gln Asn
770

<210> 219
<211> 82
<212> PRT
<213> Beta-Amyloid Peptide Precursor (Homo Sapiens)

<400> 219

Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Val Lys
1 5 10 15

Met Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln
20 25 30

Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile
35 40 45

Ile Gly Leu Met Val Gly Gly Val Val Ile Ala Thr Val Ile Ile Ile
50 55 60

Thr Leu Val Met Leu Lys Lys Gln Tyr Thr Ser Asn His His Gly Val
65 70 75 80

Val Glu

<210> 220
<211> 42
<212> PRT
<213> Amyloid Beta Peptide

<400> 220

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
1 5 10 15

Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
20 25 30

Gly Leu Met Val Gly Gly Val Val Ile Ala
35 40

<210> 221
<211> 249
<212> PRT
<213> Homo sapiens

<400> 221

Tyr Phe Arg Ala Gln Met Asp Pro Asn Arg Ile Ser Glu Asp Gly Thr
1 5 10 15

His Cys Ile Tyr Arg Ile Leu Arg Leu His Glu Asn Ala Asp Phe Gln
20 25 30

Asp Thr Thr Leu Glu Ser Gln Asp Thr Lys Leu Ile Pro Asp Ser Cys
35 40 45

Arg Arg Ile Lys Gln Ala Phe Gln Gly Ala Val Gln Lys Glu Leu Gln
50 55 60

His Ile Val Gly Ser Gln His Ile Arg Ala Glu Lys Ala Met Val Asp
65 70 75 80

Gly Ser Trp Leu Asp Leu Ala Lys Arg Ser Lys Leu Glu Ala Gln Pro
85 90 95

Phe Ala His Leu Thr Ile Asn Ala Thr Asp Ile Pro Ser Gly Ser His
100 105 110

Lys Val Ser Leu Ser Ser Trp Tyr His Asp Arg Gly Trp Ala Lys Ile
115 120 125

Ser Asn Met Thr Phe Ser Asn Gly Lys Leu Ile Val Asn Gln Asp Gly
130 135 140

Phe Tyr Tyr Leu Tyr Ala Asn Ile Cys Phe Arg His His Glu Thr Ser
145 150 155 160

Gly Asp Leu Ala Thr Glu Tyr Leu Gln Leu Met Val Tyr Val Thr Lys
165 170 175

Thr Ser Ile Lys Ile Pro Ser Ser His Thr Leu Met Lys Gly Gly Ser
180 185 190

Thr Lys Tyr Trp Ser Gly Asn Ser Glu Phe His Phe Tyr Ser Ile Asn

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195      200      205

Val Gly Gly Phe Phe Lys Leu Arg Ser Gly Glu Glu Ile Ser Ile Glu
 210      215      220

Val Ser Asn Pro Ser Leu Leu Asp Pro Asp Gln Asp Ala Thr Tyr Phe
 225      230      235      240

Gly Ala Phe Lys Val Arg Asp Ile Asp
      245

<210> 222
<211> 244
<212> PRT
<213> Homo sapiens

<400> 222

Met Asp Pro Asn Arg Ile Ser Glu Asp Gly Thr His Cys Ile Tyr Arg
 1      5      10      15

Ile Leu Arg Leu His Glu Asn Ala Asp Phe Gln Asp Thr Thr Leu Glu
      20      25      30

Ser Gln Asp Thr Lys Leu Ile Pro Asp Ser Cys Arg Arg Ile Lys Gln
      35      40      45

Ala Phe Gln Gly Ala Val Gln Lys Glu Leu Gln His Ile Val Gly Ser
      50      55      60

Gln His Ile Arg Ala Glu Lys Ala Met Val Asp Gly Ser Trp Leu Asp
      65      70      75      80

Leu Ala Lys Arg Ser Lys Leu Glu Ala Gln Pro Phe Ala His Leu Thr
      85      90      95

Ile Asn Ala Thr Asp Ile Pro Ser Gly Ser His Lys Val Ser Leu Ser
      100      105      110

Ser Trp Tyr His Asp Arg Gly Trp Ala Lys Ile Ser Asn Met Thr Phe
      115      120      125

Ser Asn Gly Lys Leu Ile Val Asn Gln Asp Gly Phe Tyr Tyr Leu Tyr
      130      135      140

Ala Asn Ile Cys Phe Arg His His Glu Thr Ser Gly Asp Leu Ala Thr
      145      150      155      160

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Glu Tyr Leu Gln Leu Met Val Tyr Val Thr Lys Thr Ser Ile Lys Ile
165 170 175

Pro Ser Ser His Thr Leu Met Lys Gly Gly Ser Thr Lys Tyr Trp Ser
180 185 190

Gly Asn Ser Glu Phe His Phe Tyr Ser Ile Asn Val Gly Gly Phe Phe
195 200 205

Lys Leu Arg Ser Gly Glu Glu Ile Ser Ile Glu Val Ser Asn Pro Ser
210 215 220

Leu Leu Asp Pro Asp Gln Asp Ala Thr Tyr Phe Gly Ala Phe Lys Val
225 230 235 240

Arg Asp Ile Asp

<210> 223
<211> 247
<212> PRT
<213> Mus musculus

<400> 223

Tyr Phe Arg Ala Gln Met Asp Pro Asn Arg Ile Ser Glu Asp Ser Thr
1 5 10 15

His Cys Phe Tyr Arg Ile Leu Arg Leu His Glu Asn Ala Gly Leu Gln
20 25 30

Asp Ser Thr Leu Glu Ser Glu Asp Thr Leu Pro Asp Ser Cys Arg Arg
35 40 45

Met Lys Gln Ala Phe Gln Gly Ala Val Gln Lys Glu Leu Gln His Ile
50 55 60

Val Gly Pro Gln Arg Phe Ser Gly Ala Pro Ala Met Met Glu Gly Ser
65 70 75 80

Trp Leu Asp Val Ala Gln Arg Gly Lys Pro Glu Ala Gln Pro Phe Ala
85 90 95

His Leu Thr Ile Asn Ala Ala Ser Ile Pro Ser Gly Ser His Lys Val
100 105 110

Thr Leu Ser Ser Trp Tyr His Asp Arg Gly Trp Ala Lys Ile Ser Asn

115 120 125

Met Thr Leu Ser Asn Gly Lys Leu Arg Val Asn Gln Asp Gly Phe Tyr
130 135 140

Tyr Leu Tyr Ala Asn Ile Cys Phe Arg His His Glu Thr Ser Gly Ser
145 150 155 160

Val Pro Thr Asp Tyr Leu Gln Leu Met Val Tyr Val Val Lys Thr Ser
165 170 175

Ile Lys Ile Pro Ser Ser His Asn Leu Met Lys Gly Gly Ser Thr Lys
180 185 190

Asn Trp Ser Gly Asn Ser Glu Phe His Phe Tyr Ser Ile Asn Val Gly
195 200 205

Gly Phe Phe Lys Leu Arg Ala Gly Glu Glu Ile Ser Ile Gln Val Ser
210 215 220

Asn Pro Ser Leu Leu Asp Pro Asp Gln Asp Ala Thr Tyr Phe Gly Ala
225 230 235 240

Phe Lys Val Gln Asp Ile Asp
245

<210> 224
<211> 199
<212> PRT
<213> Mus musculus

<400> 224

Met Lys Gln Ala Phe Gln Gly Ala Val Gln Lys Glu Leu Gln His Ile
1 5 10 15

Val Gly Pro Gln Arg Phe Ser Gly Ala Pro Ala Met Met Glu Gly Ser
20 25 30

Trp Leu Asp Val Ala Gln Arg Gly Lys Pro Glu Ala Gln Pro Phe Ala
35 40 45

His Leu Thr Ile Asn Ala Ala Ser Ile Pro Ser Gly Ser His Lys Val
50 55 60

Thr Leu Ser Ser Trp Tyr His Asp Arg Gly Trp Ala Lys Ile Ser Asn
65 70 75 80

Met Thr Leu Ser Asn Gly Lys Leu Arg Val Asn Gln Asp Gly Phe Tyr
85 90 95

Tyr Leu Tyr Ala Asn Ile Cys Phe Arg His His Glu Thr Ser Gly Ser
100 105 110

Val Pro Thr Asp Tyr Leu Gln Leu Met Val Tyr Val Val Lys Thr Ser
115 120 125

Ile Lys Ile Pro Ser Ser His Asn Leu Met Lys Gly Gly Ser Thr Lys
130 135 140

Asn Trp Ser Gly Asn Ser Glu Phe His Phe Tyr Ser Ile Asn Val Gly
145 150 155 160

Gly Phe Phe Lys Leu Arg Ala Gly Glu Glu Ile Ser Ile Gln Val Ser
165 170 175

Asn Pro Ser Leu Leu Asp Pro Asp Gln Asp Ala Thr Tyr Phe Gly Ala
180 185 190

Phe Lys Val Gln Asp Ile Asp
195

<210> 225
<211> 114
<212> PRT
<213> Rattus sp.

<400> 225

Pro Met Phe Ile Val Asn Thr Asn Val Pro Arg Ala Ser Val Pro Glu
1 5 10 15

Gly Phe Leu Ser Glu Leu Thr Gln Gln Leu Ala Gln Ala Thr Gly Lys
20 25 30

Pro Ala Gln Tyr Ile Ala Val His Val Val Pro Asp Gln Leu Met Thr
35 40 45

Phe Ser Gly Thr Ser Asp Pro Cys Ala Leu Cys Ser Leu His Ser Ile
50 55 60

Gly Lys Ile Gly Gly Ala Gln Asn Arg Asn Tyr Ser Lys Leu Leu Cys
65 70 75 80

Gly Leu Leu Ser Asp Arg Leu His Ile Ser Pro Asp Arg Val Tyr Ile

	85							90						95	
Asn	Tyr	Tyr	Asp	Met	Asn	Ala	Ala	Asn	Val	Gly	Trp	Asn	Gly	Ser	Thr
			100					105					110		

Phe Ala

<210> 226
<211> 114
<212> PRT
<213> Mus musculus

<400> 226

Pro	Met	Phe	Ile	Val	Asn	Thr	Asn	Val	Pro	Arg	Ala	Ser	Val	Pro	Glu
1				5					10					15	

Gly	Phe	Leu	Ser	Glu	Leu	Thr	Gln	Gln	Leu	Ala	Gln	Ala	Thr	Gly	Lys
			20					25						30	

Pro	Ala	Gln	Tyr	Ile	Ala	Val	His	Val	Val	Pro	Asp	Gln	Leu	Met	Thr
		35					40					45			

Phe	Ser	Gly	Thr	Asn	Asp	Pro	Cys	Ala	Leu	Cys	Ser	Leu	His	Ser	Ile
	50					55					60				

Gly	Lys	Ile	Gly	Gly	Ala	Gln	Asn	Arg	Asn	Tyr	Ser	Lys	Leu	Leu	Cys
65					70					75					80

Gly	Leu	Leu	Ser	Asp	Arg	Leu	His	Ile	Ser	Pro	Asp	Arg	Val	Tyr	Ile
				85					90					95	

Asn	Tyr	Tyr	Asp	Met	Asn	Ala	Ala	Asn	Val	Gly	Trp	Asn	Gly	Ser	Thr
			100					105					110		

Phe Ala

<210> 227
<211> 114
<212> PRT
<213> Homo sapiens

<400> 227

Pro	Met	Phe	Ile	Val	Asn	Thr	Asn	Val	Pro	Arg	Ala	Ser	Val	Pro	Asp
1				5					10					15	

Gly Phe Leu Ser Glu Leu Thr Gln Gln Leu Ala Gln Ala Thr Gly Lys
20 25 30

Pro Pro Gln Tyr Ile Ala Val His Val Val Pro Asp Gln Leu Met Ala
35 40 45

Phe Gly Gly Ser Ser Glu Pro Cys Ala Leu Cys Ser Leu His Ser Ile
50 55 60

Gly Lys Ile Gly Gly Ala Gln Asn Arg Ser Tyr Ser Lys Leu Leu Cys
65 70 75 80

Gly Leu Leu Ala Glu Arg Leu Arg Ile Ser Pro Asp Arg Val Tyr Ile
85 90 95

Asn Tyr Tyr Asp Met Asn Ala Ala Asn Val Gly Trp Asn Asn Ser Thr
100 105 110

Phe Ala

<210> 228
<211> 155
<212> PRT
<213> Homo sapiens

<400> 228

Met Thr Pro Gly Lys Thr Ser Leu Val Ser Leu Leu Leu Leu Ser
1 5 10 15

Leu Glu Ala Ile Val Lys Ala Gly Ile Thr Ile Pro Arg Asn Pro Gly
20 25 30

Cys Pro Asn Ser Glu Asp Lys Asn Phe Pro Arg Thr Val Met Val Asn
35 40 45

Leu Asn Ile His Asn Arg Asn Thr Asn Thr Asn Pro Lys Arg Ser Ser
50 55 60

Asp Tyr Tyr Asn Arg Ser Thr Ser Pro Trp Asn Leu His Arg Asn Glu
65 70 75 80

Asp Pro Glu Arg Tyr Pro Ser Val Ile Trp Glu Ala Lys Cys Arg His
85 90 95

Leu Gly Cys Ile Asn Ala Asp Gly Asn Val Asp Tyr His Met Asn Ser
100 105 110

Val Pro Ile Gln Gln Glu Ile Leu Val Leu Arg Arg Glu Pro Pro His
115 120 125

Cys Pro Asn Ser Phe Arg Leu Glu Lys Ile Leu Val Ser Val Gly Cys
130 135 140

Thr Cys Val Thr Pro Ile Val His His Val Ala
145 150 155

<210> 229
<211> 158
<212> PRT
<213> Mus musculus

<400> 229

Met Ser Pro Gly Arg Ala Ser Ser Val Ser Leu Met Leu Leu Leu Leu
1 5 10 15

Leu Ser Leu Ala Ala Thr Val Lys Ala Ala Ala Ile Ile Pro Gln Ser
20 25 30

Ser Ala Cys Pro Asn Thr Glu Ala Lys Asp Phe Leu Gln Asn Val Lys
35 40 45

Val Asn Leu Lys Val Phe Asn Ser Leu Gly Ala Lys Val Ser Ser Arg
50 55 60

Arg Pro Ser Asp Tyr Leu Asn Arg Ser Thr Ser Pro Trp Thr Leu His
65 70 75 80

Arg Asn Glu Asp Pro Asp Arg Tyr Pro Ser Val Ile Trp Glu Ala Gln
85 90 95

Cys Arg His Gln Arg Cys Val Asn Ala Glu Gly Lys Leu Asp His His
100 105 110

Met Asn Ser Val Leu Ile Gln Gln Glu Ile Leu Val Leu Lys Arg Glu
115 120 125

Pro Glu Ser Cys Pro Phe Thr Phe Arg Val Glu Lys Met Leu Val Gly
130 135 140

Val Gly Cys Thr Cys Val Ala Ser Ile Val Arg Gln Ala Ala
145 150 155

<210> 230
<211> 132
<212> PRT
<213> Homo sapiens

<400> 230

Met Ala Leu Leu Leu Thr Thr Val Ile Ala Leu Thr Cys Leu Gly Gly
1 5 10 15

Phe Ala Ser Pro Gly Pro Val Pro Pro Ser Thr Ala Leu Arg Glu Leu
20 25 30

Ile Glu Glu Leu Val Asn Ile Thr Gln Asn Gln Lys Ala Pro Leu Cys
35 40 45

Asn Gly Ser Met Val Trp Ser Ile Asn Leu Thr Ala Gly Met Tyr Cys
50 55 60

Ala Ala Leu Glu Ser Leu Ile Asn Val Ser Gly Cys Ser Ala Ile Glu
65 70 75 80

Lys Thr Gln Arg Met Leu Ser Gly Phe Cys Pro His Lys Val Ser Ala
85 90 95

Gly Gln Phe Ser Ser Leu His Val Arg Asp Thr Lys Ile Glu Val Ala
100 105 110

Gln Phe Val Lys Asp Leu Leu Leu His Leu Lys Lys Leu Phe Arg Glu
115 120 125

Gly Arg Phe Asn
130

<210> 231
<211> 112
<212> PRT
<213> Homo sapiens

<400> 231

Gly Pro Val Pro Pro Ser Thr Ala Leu Arg Glu Leu Ile Glu Glu Leu
1 5 10 15

Val Asn Ile Thr Gln Asn Gln Lys Ala Pro Leu Cys Asn Gly Ser Met
20 25 30

Val Trp Ser Ile Asn Leu Thr Ala Gly Met Tyr Cys Ala Ala Leu Glu
35 40 45

Ser Leu Ile Asn Val Ser Gly Cys Ser Ala Ile Glu Lys Thr Gln Arg
50 55 60

Met Leu Ser Gly Phe Cys Pro His Lys Val Ser Ala Gly Gln Phe Ser
65 70 75 80

Ser Leu His Val Arg Asp Thr Lys Ile Glu Val Ala Gln Phe Val Lys
85 90 95

Asp Leu Leu Leu His Leu Lys Lys Leu Phe Arg Glu Gly Arg Phe Asn
100 105 110

<210> 232

<211> 111

<212> PRT

<213> Mus musculus

<400> 232

Gly Pro Val Pro Arg Ser Val Ser Leu Pro Leu Thr Leu Lys Glu Leu
1 5 10 15

Ile Glu Glu Leu Ser Asn Ile Thr Gln Asp Gln Thr Pro Leu Cys Asn
20 25 30

Gly Ser Met Val Trp Ser Val Asp Leu Ala Ala Gly Gly Phe Cys Val
35 40 45

Ala Leu Asp Ser Leu Thr Asn Ile Ser Asn Cys Asn Ala Ile Tyr Arg
50 55 60

Thr Gln Arg Ile Leu His Gly Leu Cys Asn Arg Lys Ala Pro Thr Thr
65 70 75 80

Val Ser Ser Leu Pro Asp Thr Lys Ile Glu Val Ala His Phe Ile Thr
85 90 95

Lys Leu Leu Ser Tyr Thr Lys Gln Leu Phe Arg His Gly Pro Phe
100 105 110

<210> 233

<211> 134

<212> PRT

<213> Homo sapiens

<400> 233

Met Arg Met Leu Leu His Leu Ser Leu Leu Ala Leu Gly Ala Ala Tyr
1 5 10 15

Val Tyr Ala Ile Pro Thr Glu Ile Pro Thr Ser Ala Leu Val Lys Glu
20 25 30

Thr Leu Ala Leu Leu Ser Thr His Arg Thr Leu Leu Ile Ala Asn Glu
35 40 45

Thr Leu Arg Ile Pro Val Pro Val His Lys Asn His Gln Leu Cys Thr
50 55 60

Glu Glu Ile Phe Gln Gly Ile Gly Thr Leu Glu Ser Gln Thr Val Gln
65 70 75 80

Gly Gly Thr Val Glu Arg Leu Phe Lys Asn Leu Ser Leu Ile Lys Lys
85 90 95

Tyr Ile Asp Gly Gln Lys Lys Lys Cys Gly Glu Glu Arg Arg Arg Val
100 105 110

Asn Gln Phe Leu Asp Tyr Leu Gln Glu Phe Leu Gly Val Met Asn Thr
115 120 125

Glu Trp Ile Ile Glu Ser
130

<210> 234
<211> 115
<212> PRT
<213> Homo sapiens

<400> 234

Ile Pro Thr Glu Ile Pro Thr Ser Ala Leu Val Lys Glu Thr Leu Ala
1 5 10 15

Leu Leu Ser Thr His Arg Thr Leu Leu Ile Ala Asn Glu Thr Leu Arg
20 25 30

Ile Pro Val Pro Val His Lys Asn His Gln Leu Cys Thr Glu Glu Ile
35 40 45

Phe Gln Gly Ile Gly Thr Leu Glu Ser Gln Thr Val Gln Gly Gly Thr
50 55 60

Val Glu Arg Leu Phe Lys Asn Leu Ser Leu Ile Lys Lys Tyr Ile Asp
65 70 75 80

Gly Gln Lys Lys Lys Cys Gly Glu Glu Arg Arg Arg Val Asn Gln Phe
85 90 95

Leu Asp Tyr Leu Gln Glu Phe Leu Gly Val Met Asn Thr Glu Trp Ile
100 105 110

Ile Glu Ser
115

<210> 235
<211> 113
<212> PRT
<213> Mus musculus

<400> 235

Met Glu Ile Pro Met Ser Thr Val Val Lys Glu Thr Leu Thr Gln Leu
1 5 10 15

Ser Ala His Arg Ala Leu Leu Thr Ser Asn Glu Thr Met Arg Leu Pro
20 25 30

Val Pro Thr His Lys Asn His Gln Leu Cys Ile Gly Glu Ile Phe Gln
35 40 45

Gly Leu Asp Ile Leu Lys Asn Gln Thr Val Arg Gly Gly Thr Val Glu
50 55 60

Met Leu Phe Gln Asn Leu Ser Leu Ile Lys Lys Tyr Ile Asp Arg Gln
65 70 75 80

Lys Glu Lys Cys Gly Glu Glu Arg Arg Arg Thr Arg Gln Phe Leu Asp
85 90 95

Tyr Leu Gln Glu Phe Leu Gly Val Met Ser Thr Glu Trp Ala Met Glu
100 105 110

Gly

<210> 236
<211> 111
<212> PRT
<213> Homo sapiens

<400> 236

Ser Asp Gly Gly Ala Gln Asp Cys Cys Leu Lys Tyr Ser Gln Arg Lys
1 5 10 15

Ile Pro Ala Lys Val Val Arg Ser Tyr Arg Lys Gln Glu Pro Ser Leu
20 25 30

Gly Cys Ser Ile Pro Ala Ile Leu Phe Leu Pro Arg Lys Arg Ser Gln
35 40 45

Ala Glu Leu Cys Ala Asp Pro Lys Glu Leu Trp Val Gln Gln Leu Met
50 55 60

Gln His Leu Asp Lys Thr Pro Ser Pro Gln Lys Pro Ala Gln Gly Cys
65 70 75 80

Arg Lys Asp Arg Gly Ala Ser Lys Thr Gly Lys Lys Gly Lys Gly Ser
85 90 95

Lys Gly Cys Lys Arg Thr Glu Arg Ser Gln Thr Pro Lys Gly Pro
100 105 110

<210> 237
<211> 110
<212> PRT
<213> Mus musculus

<400> 237

Ser Asp Gly Gly Gly Gln Asp Cys Cys Leu Lys Tyr Ser Gln Lys Lys
1 5 10 15

Ile Pro Tyr Ser Ile Val Arg Gly Tyr Arg Lys Gln Glu Pro Ser Leu
20 25 30

Gly Cys Pro Ile Pro Ala Ile Leu Phe Ser Pro Arg Lys His Ser Lys
35 40 45

Pro Glu Leu Cys Ala Asn Pro Glu Glu Gly Trp Val Gln Asn Leu Met
50 55 60

Arg Arg Leu Asp Gln Pro Pro Ala Pro Gly Lys Gln Ser Pro Gly Cys
65 70 75 80

Arg Lys Asn Arg Gly Thr Ser Lys Ser Gly Lys Lys Gly Lys Gly Ser
85 90 95

Lys Gly Cys Lys Arg Thr Glu Gln Thr Gln Pro Ser Arg Gly
100 105 110

<210> 238

<211> 74
<212> PRT
<213> Homo sapiens

<400> 238

Asp Gly Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe
1 5 10 15

Glu Ser His Val Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn
20 25 30

Thr Pro Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn
35 40 45

Arg Gln Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu
50 55 60

Glu Lys Ala Leu Asn Lys Arg Phe Lys Met
65 70

<210> 239
<211> 70
<212> PRT
<213> Mus musculus

<400> 239

Asp Gly Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe
1 5 10 15

Glu Ser His Ile Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn
20 25 30

Thr Pro Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn
35 40 45

Arg Gln Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu
50 55 60

Glu Lys Ala Leu Asn Lys
65 70

<210> 240
<211> 109
<212> PRT
<213> Homo sapiens

<400> 240

Met Lys Phe Ile Ser Thr Ser Leu Leu Leu Met Leu Leu Val Ser Ser

1 5 10 15

Leu Ser Pro Val Gln Gly Val Leu Glu Val Tyr Tyr Thr Ser Leu Arg
20 25 30

Cys Arg Cys Val Gln Glu Ser Ser Val Phe Ile Pro Arg Arg Phe Ile
35 40 45

Asp Arg Ile Gln Ile Leu Pro Arg Gly Asn Gly Cys Pro Arg Lys Glu
50 55 60

Ile Ile Val Trp Lys Lys Asn Lys Ser Ile Val Cys Val Asp Pro Gln
65 70 75 80

Ala Glu Trp Ile Gln Arg Met Met Glu Val Leu Arg Lys Arg Ser Ser
85 90 95

Ser Thr Leu Pro Val Pro Val Phe Lys Arg Lys Ile Pro
100 105

<210> 241
<211> 109
<212> PRT
<213> Mus musculus

<400> 241

Met Arg Leu Ser Thr Ala Thr Leu Leu Leu Leu Ala Ser Cys Leu
1 5 10 15

Ser Pro Gly His Gly Ile Leu Glu Ala His Tyr Thr Asn Leu Lys Cys
20 25 30

Arg Cys Ser Gly Val Ile Ser Thr Val Val Gly Leu Asn Ile Ile Asp
35 40 45

Arg Ile Gln Val Thr Pro Pro Gly Asn Gly Cys Pro Lys Thr Glu Val
50 55 60

Val Ile Trp Thr Lys Met Lys Lys Val Ile Cys Val Asn Pro Arg Ala
65 70 75 80

Lys Trp Leu Gln Arg Leu Leu Arg His Val Gln Ser Lys Ser Leu Ser
85 90 95

Ser Thr Pro Gln Ala Pro Val Ser Lys Arg Arg Ala Ala
100 105

<210> 242
<211> 97
<212> PRT
<213> Homo sapiens

<400> 242

Met Lys Val Ser Ala Ala Leu Leu Trp Leu Leu Leu Ile Ala Ala Ala
1 5 10 15

Phe Ser Pro Gln Gly Leu Ala Gly Pro Ala Ser Val Pro Thr Thr Cys
20 25 30

Cys Phe Asn Leu Ala Asn Arg Lys Ile Pro Leu Gln Arg Leu Glu Ser
35 40 45

Tyr Arg Arg Ile Thr Ser Gly Lys Cys Pro Gln Lys Ala Val Ile Phe
50 55 60

Lys Thr Lys Leu Ala Lys Asp Ile Cys Ala Asp Pro Lys Lys Lys Trp
65 70 75 80

Val Gln Asp Ser Met Lys Tyr Leu Asp Gln Lys Ser Pro Thr Pro Lys
85 90 95

Pro

<210> 243
<211> 119
<212> PRT
<213> Homo sapiens

<400> 243

Met Ala Gly Leu Met Thr Ile Val Thr Ser Leu Leu Phe Leu Gly Val
1 5 10 15

Cys Ala His His Ile Ile Pro Thr Gly Ser Val Val Ile Pro Ser Pro
20 25 30

Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn Arg Val Val
35 40 45

Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala Gly Val Ile
50 55 60

Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro Lys Gln Glu
65 70 75 80

Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln Lys Lys Ala
85 90 95

Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro Val Gln Arg Tyr
100 105 110

Pro Gly Asn Gln Thr Thr Cys
115

<210> 244
<211> 94
<212> PRT
<213> Homo sapiens

<400> 244

Met Met Gly Leu Ser Leu Ala Ser Ala Val Leu Leu Ala Ser Leu Leu
1 5 10 15

Ser Leu His Leu Gly Thr Ala Thr Arg Gly Ser Asp Ile Ser Lys Thr
20 25 30

Cys Cys Phe Gln Tyr Ser His Lys Pro Leu Pro Trp Thr Trp Val Arg
35 40 45

Ser Tyr Glu Phe Thr Ser Asn Ser Cys Ser Gln Arg Ala Val Ile Phe
50 55 60

Thr Thr Lys Arg Gly Lys Lys Val Cys Thr His Pro Arg Lys Lys Trp
65 70 75 80

Val Gln Lys Tyr Ile Ser Leu Leu Lys Thr Pro Lys Gln Leu
85 90

<210> 245
<211> 97
<212> PRT
<213> Mus musculus

<400> 245

Met Gln Ser Ser Thr Ala Leu Leu Phe Leu Leu Leu Thr Val Thr Ser
1 5 10 15

Phe Thr Ser Gln Val Leu Ala His Pro Gly Ser Ile Pro Thr Ser Cys
20 25 30

Cys Phe Ile Met Thr Ser Lys Lys Ile Pro Asn Thr Leu Leu Lys Ser

35

40

45

Tyr Lys Arg Ile Thr Asn Asn Arg Cys Thr Leu Lys Ala Ile Val Phe
50 55 60

Lys Thr Arg Leu Gly Lys Glu Ile Cys Ala Asp Pro Lys Lys Lys Trp
65 70 75 80

Val Gln Asp Ala Thr Lys His Leu Asp Gln Lys Leu Gln Thr Pro Lys
85 90 95

Pro

<210> 246
<211> 119
<212> PRT
<213> Mus musculus

<400> 246

Met Ala Gly Ser Ala Thr Ile Val Ala Gly Leu Leu Leu Leu Val Ala
1 5 10 15

Cys Ala Cys Cys Ile Phe Pro Ile Asp Ser Val Thr Ile Pro Ser Ser
20 25 30

Cys Cys Thr Ser Phe Ile Ser Lys Lys Ile Pro Glu Asn Arg Val Val
35 40 45

Ser Tyr Gln Leu Ala Asn Gly Ser Ile Cys Pro Lys Ala Gly Val Ile
50 55 60

Phe Ile Thr Lys Lys Gly His Lys Ile Cys Thr Asp Pro Lys Leu Leu
65 70 75 80

Trp Val Gln Arg His Ile Gln Lys Leu Asp Ala Lys Lys Asn Gln Pro
85 90 95

Ser Lys Gly Ala Lys Ala Val Arg Thr Lys Phe Ala Val Gln Arg Arg
100 105 110

Arg Gly Asn Ser Thr Glu Val
115

<210> 247
<211> 553
<212> PRT

<213> Homo sapiens

<400> 247

Met Thr Ala Pro Gly Ala Ala Gly Arg Cys Pro Pro Thr Thr Trp Leu
1 5 10 15

Gly Ser Leu Leu Leu Leu Val Cys Leu Leu Ala Ser Arg Ser Ile Thr
20 25 30

Glu Glu Val Ser Glu Tyr Cys Ser His Met Ile Gly Ser Gly His Leu
35 40 45

Gln Ser Leu Gln Arg Leu Ile Asp Ser Gln Met Glu Thr Ser Cys Gln
50 55 60

Ile Thr Phe Glu Phe Val Asp Gln Glu Gln Leu Lys Asp Pro Val Cys
65 70 75 80

Tyr Leu Lys Lys Ala Phe Leu Leu Val Gln Asp Ile Met Glu Asp Thr
85 90 95

Met Arg Phe Arg Asp Asn Thr Pro Asn Ala Ile Ala Ile Val Gln Leu
100 105 110

Gln Glu Leu Ser Leu Arg Leu Lys Ser Cys Phe Thr Lys Asp Tyr Glu
115 120 125

Glu His Asp Lys Ala Cys Val Arg Thr Phe Tyr Glu Thr Pro Leu Gln
130 135 140

Leu Leu Glu Lys Val Lys Asn Val Phe Asn Glu Thr Lys Asn Leu Leu
145 150 155 160

Asp Lys Asp Trp Asn Ile Phe Ser Lys Asn Cys Asn Asn Ser Phe Ala
165 170 175

Glu Cys Ser Ser Gln Asp Val Val Thr Lys Pro Asp Cys Asn Cys Leu
180 185 190

Tyr Pro Lys Ala Ile Pro Ser Ser Asp Pro Ala Ser Val Ser Pro His
195 200 205

Gln Pro Leu Ala Pro Ser Met Ala Pro Val Ala Gly Leu Thr Trp Glu
210 215 220

Asp Ser Glu Gly Thr Glu Gly Ser Ser Leu Leu Pro Gly Glu Gln Pro

225		230		235		240
Leu His Thr Val	Asp	Pro Gly Ser Ala	Lys Gln Arg Pro	Pro Arg Ser		
	245		250		255	
Thr Cys Gln Ser	Phe Glu Pro	Pro Glu Thr	Pro Val Val	Lys Asp Ser		
	260		265		270	
Thr Ile Gly Gly	Ser Pro Gln	Pro Arg Pro	Ser Val Gly	Ala Phe Asn		
	275		280		285	
Pro Gly Met Glu	Asp Ile Leu	Asp Ser Ala	Met Gly Thr	Asn Trp Val		
	290		295		300	
Pro Glu Glu Ala	Ser Gly Glu	Ala Ser Glu	Ile Pro Val	Pro Gln Gly		
	305		310		315	
Thr Glu Leu Ser	Pro Ser Arg	Pro Gly Gly	Gly Ser Met	Gln Thr Glu		
	325		330		335	
Pro Ala Arg Pro	Ser Asn Phe	Leu Ser Ala	Ser Ser Pro	Leu Pro Ala		
	340		345		350	
Ser Ala Lys Gly	Gln Gln Pro	Ala Asp Val	Thr Gly Thr	Ala Leu Pro		
	355		360		365	
Arg Val Gly Pro	Val Arg Pro	Thr Gly Gln	Asp Trp Asn	His Thr Pro		
	370		375		380	
Gln Lys Thr Asp	His Pro Ser	Ala Leu Leu	Arg Asp Pro	Pro Glu Pro		
	385		390		395	
Gly Ser Pro Arg	Ile Ser Ser	Pro Arg Pro	Gln Gly Leu	Ser Asn Pro		
	405		410		415	
Ser Thr Leu Ser	Ala Gln Pro	Gln Leu Ser	Arg Ser His	Ser Ser Gly		
	420		425		430	
Ser Val Leu Pro	Leu Gly Glu	Leu Glu Gly	Arg Arg Ser	Thr Arg Asp		
	435		440		445	
Arg Arg Ser Pro	Ala Glu Pro	Glu Gly Gly	Pro Ala Ser	Glu Gly Ala		
	450		455		460	
Ala Arg Pro Leu	Pro Arg Phe	Asn Ser Val	Pro Leu Thr	Asp Thr His		
	465		470		475	
					480	

Glu Arg Gln Ser Glu Gly Ser Ser Ser Pro Gln Leu Gln Glu Ser Val
485 490 495

Phe His Leu Leu Val Pro Ser Val Ile Leu Val Leu Leu Ala Val Gly
500 505 510

Gly Leu Leu Phe Tyr Arg Trp Arg Arg Arg Ser His Gln Glu Pro Gln
515 520 525

Arg Ala Asp Ser Pro Leu Glu Gln Pro Glu Gly Ser Pro Leu Thr Gln
530 535 540

Asp Asp Arg Gln Val Glu Leu Pro Val
545 550

<210> 248
<211> 552
<212> PRT
<213> Mus musculus

<400> 248

Met Thr Ala Arg Gly Ala Ala Gly Arg Cys Pro Ser Ser Thr Trp Leu
1 5 10 15

Gly Ser Arg Leu Leu Leu Val Cys Leu Leu Met Ser Arg Ser Ile Ala
20 25 30

Lys Glu Val Ser Glu His Cys Ser His Met Ile Gly Asn Gly His Leu
35 40 45

Lys Val Leu Gln Gln Leu Ile Asp Ser Gln Met Glu Thr Ser Cys Gln
50 55 60

Ile Ala Phe Glu Phe Val Asp Gln Glu Gln Leu Asp Asp Pro Val Cys
65 70 75 80

Tyr Leu Lys Lys Ala Phe Phe Leu Val Gln Asp Ile Ile Asp Glu Thr
85 90 95

Met Arg Phe Lys Asp Asn Thr Pro Asn Ala Asn Ala Thr Glu Arg Leu
100 105 110

Gln Glu Leu Ser Asn Asn Leu Asn Ser Cys Phe Thr Lys Asp Tyr Glu
115 120 125

Glu Gln Asn Lys Ala Cys Val Arg Thr Phe His Glu Thr Pro Leu Gln
130 135 140

Leu Leu Glu Lys Ile Lys Asn Phe Phe Asn Glu Thr Lys Asn Leu Leu
145 150 155 160

Glu Lys Asp Trp Asn Ile Phe Thr Lys Asn Cys Asn Asn Ser Phe Ala
165 170 175

Lys Cys Ser Ser Arg Asp Val Val Thr Lys Pro Asp Cys Asn Cys Leu
180 185 190

Tyr Pro Lys Ala Thr Pro Ser Ser Asp Pro Ala Ser Ala Ser Pro His
195 200 205

Gln Pro Pro Ala Pro Ser Met Ala Pro Leu Ala Gly Leu Ala Trp Asp
210 215 220

Asp Ser Gln Arg Thr Glu Gly Ser Ser Leu Leu Pro Ser Glu Leu Pro
225 230 235 240

Leu Arg Ile Glu Asp Pro Gly Ser Ala Lys Gln Arg Pro Pro Arg Ser
245 250 255

Thr Cys Gln Thr Leu Glu Ser Thr Glu Gln Pro Asn His Gly Asp Arg
260 265 270

Leu Thr Glu Asp Ser Gln Pro His Pro Ser Ala Gly Gly Pro Val Pro
275 280 285

Gly Val Glu Asp Ile Leu Glu Ser Ser Leu Gly Thr Asn Trp Val Leu
290 295 300

Glu Glu Ala Ser Gly Glu Ala Ser Glu Gly Phe Leu Thr Gln Glu Ala
305 310 315 320

Lys Phe Ser Pro Ser Thr Pro Val Gly Gly Ser Ile Gln Ala Glu Thr
325 330 335

Asp Arg Pro Arg Ala Leu Ser Ala Ser Pro Phe Pro Lys Ser Thr Glu
340 345 350

Asp Gln Lys Pro Val Asp Ile Thr Asp Arg Pro Leu Thr Glu Val Asn
355 360 365

Pro Met Arg Pro Ile Gly Gln Thr Gln Asn Asn Thr Pro Glu Lys Thr

370	375	380
Asp Gly Thr Ser Thr Leu Arg Glu Asp His Gln Glu Pro Gly Ser Pro		
385	390	395 400
His Ile Ala Thr Pro Asn Pro Gln Arg Val Ser Asn Ser Ala Thr Pro		
	405	410 415
Val Ala Gln Leu Leu Leu Pro Lys Ser His Ser Trp Gly Ile Val Leu		
	420	425 430
Pro Leu Gly Glu Leu Glu Gly Lys Arg Ser Thr Arg Asp Arg Arg Ser		
	435	440 445
Pro Ala Glu Leu Glu Gly Gly Ser Ala Ser Glu Gly Ala Ala Arg Pro		
	450	455 460
Val Ala Arg Phe Asn Ser Ile Pro Leu Thr Asp Thr Gly His Val Glu		
465	470	475 480
Gln His Glu Gly Ser Ser Asp Pro Gln Ile Pro Glu Ser Val Phe His		
	485	490 495
Leu Leu Val Pro Gly Ile Ile Leu Val Leu Leu Thr Val Gly Gly Leu		
	500	505 510
Leu Phe Tyr Lys Trp Lys Trp Arg Ser His Arg Asp Pro Gln Thr Leu		
	515	520 525
Asp Ser Ser Val Gly Arg Pro Glu Asp Ser Ser Leu Thr Gln Asp Glu		
	530	535 540
Asp Arg Gln Val Glu Leu Pro Val		
545	550	
<210> 249		
<211> 108		
<212> PRT		
<213> Homo sapiens		
<400> 249		
Met Lys Ala Leu Cys Leu Leu Leu Leu Pro Val Leu Gly Leu Leu Val		
1	5	10 15
Ser Ser Lys Thr Leu Cys Ser Met Glu Glu Ala Ile Asn Glu Arg Ile		
	20	25 30

Gln Glu Val Ala Gly Ser Leu Ile Phe Arg Ala Ile Ser Ser Ile Gly
35 40 45

Leu Glu Cys Gln Ser Val Thr Ser Arg Gly Asp Leu Ala Thr Cys Pro
50 55 60

Arg Gly Phe Ala Val Thr Gly Cys Thr Cys Gly Ser Ala Cys Gly Ser
65 70 75 80

Trp Asp Val Arg Ala Glu Thr Thr Cys His Cys Gln Cys Ala Gly Met
85 90 95

Asp Trp Thr Gly Ala Arg Cys Cys Arg Val Gln Pro
100 105

<210> 250
<211> 114
<212> PRT
<213> Mus musculus

<400> 250

Met Lys Asn Leu Ser Phe Pro Leu Leu Phe Leu Phe Phe Leu Val Pro
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Glu Leu Leu Gly Ser Ser Met Pro Leu Cys Pro Ile Asp Glu Ala Ile
20 25 30

Asp Lys Lys Ile Lys Gln Asp Phe Asn Ser Leu Phe Pro Asn Ala Ile
35 40 45

Lys Asn Ile Gly Leu Asn Cys Trp Thr Val Ser Ser Arg Gly Lys Leu
50 55 60

Ala Ser Cys Pro Glu Gly Thr Ala Val Leu Ser Cys Ser Cys Gly Ser
65 70 75 80

Ala Cys Gly Ser Trp Asp Ile Arg Glu Glu Lys Val Cys His Cys Gln
85 90 95

Cys Ala Arg Ile Asp Trp Thr Ala Ala Arg Cys Cys Lys Leu Gln Val
100 105 110

Ala Ser

<210> 251
<211> 174

<212> PRT

<213> Homo sapiens

<400> 251

Gln Asp Gln Gly Gly Leu Val Thr Glu Thr Ala Asp Pro Gly Ala Gln
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Ala Gln Gln Gly Leu Gly Phe Gln Lys Leu Pro Glu Glu Glu Pro Glu
20 25 30

Thr Asp Leu Ser Pro Gly Leu Pro Ala Ala His Leu Ile Gly Ala Pro
35 40 45

Leu Lys Gly Gln Gly Leu Gly Trp Glu Thr Thr Lys Glu Gln Ala Phe
50 55 60

Leu Thr Ser Gly Thr Gln Phe Ser Asp Ala Glu Gly Leu Ala Leu Pro
65 70 75 80

Gln Asp Gly Leu Tyr Tyr Leu Tyr Cys Leu Val Gly Tyr Arg Gly Arg
85 90 95

Ala Pro Pro Gly Gly Gly Asp Pro Gln Gly Arg Ser Val Thr Leu Arg
100 105 110

Ser Ser Leu Tyr Arg Ala Gly Gly Ala Tyr Gly Pro Gly Thr Pro Glu
115 120 125

Leu Leu Leu Glu Gly Ala Glu Thr Val Thr Pro Val Leu Asp Pro Ala
130 135 140

Arg Arg Gln Gly Tyr Gly Pro Leu Trp Tyr Thr Ser Val Gly Phe Gly
145 150 155 160

Gly Leu Val Gln Leu Arg Arg Gly Glu Arg Val Tyr Val Asn
165 170

<210> 252

<211> 258

<212> PRT

<213> Mus musculus

<400> 252

Gln Asp Gln Gly Arg Arg Val Glu Lys Ile Ile Gly Ser Gly Ala Gln
1 5 10 15

Ala Gln Lys Arg Leu Asp Asp Ser Lys Pro Ser Cys Ile Leu Pro Ser

Val Gly

<210> 253
<211> 128
<212> PRT
<213> RNA-phage PP7

<400> 253

Met Ser Lys Thr Ile Val Leu Ser Val Gly Glu Ala Thr Arg Thr Leu
1 5 10 15

Thr Glu Ile Gln Ser Thr Ala Asp Arg Gln Ile Phe Glu Glu Lys Val
20 25 30

Gly Pro Leu Val Gly Arg Leu Arg Leu Thr Ala Ser Leu Arg Gln Asn
35 40 45

Gly Ala Lys Thr Ala Tyr Arg Val Asn Leu Lys Leu Asp Gln Ala Asp
50 55 60

Val Val Asp Cys Ser Thr Ser Val Cys Gly Glu Leu Pro Lys Val Arg
65 70 75 80

Tyr Thr Gln Val Trp Ser His Asp Val Thr Ile Val Ala Asn Ser Thr
85 90 95

Glu Ala Ser Arg Lys Ser Leu Tyr Asp Leu Thr Lys Ser Leu Val Ala
100 105 110

Thr Ser Gln Val Glu Asp Leu Val Val Asn Leu Val Pro Leu Gly Arg
115 120 125

<210> 254
<211> 330
<212> PRT
<213> RNA-phage SP A1 protein

<400> 254

Ala Lys Leu Asn Gln Val Thr Leu Ser Lys Ile Gly Lys Asn Gly Asp
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Gln Thr Leu Thr Leu Thr Pro Arg Gly Val Asn Pro Thr Asn Gly Val
20 25 30

Ala Ser Leu Ser Glu Ala Gly Ala Val Pro Ala Leu Glu Lys Arg Val
35 40 45

Thr Val Ser Val Ala Gln Pro Ser Arg Asn Arg Lys Asn Phe Lys Val

50	55	60
Gln Ile Lys Leu Gln Asn Pro Thr Ala Cys Thr Arg Asp Ala Cys Asp 65 70 75 80		
Pro Ser Val Thr Arg Ser Ala Phe Ala Asp Val Thr Leu Ser Phe Thr 85 90 95		
Ser Tyr Ser Thr Asp Glu Glu Arg Ala Leu Ile Arg Thr Glu Leu Ala 100 105 110		
Ala Leu Leu Ala Asp Pro Leu Ile Val Asp Ala Ile Asp Asn Leu Asn 115 120 125		
Pro Ala Tyr Trp Ala Ala Leu Leu Val Ala Ser Ser Gly Gly Gly Asp 130 135 140		
Asn Pro Ser Asp Pro Asp Val Pro Val Val Pro Asp Val Lys Pro Pro 145 150 155 160		
Asp Gly Thr Gly Arg Tyr Lys Cys Pro Phe Ala Cys Tyr Arg Leu Gly 165 170 175		
Ser Ile Tyr Glu Val Gly Lys Glu Gly Ser Pro Asp Ile Tyr Glu Arg 180 185 190		
Gly Asp Glu Val Ser Val Thr Phe Asp Tyr Ala Leu Glu Asp Phe Leu 195 200 205		
Gly Asn Thr Asn Trp Arg Asn Trp Asp Gln Arg Leu Ser Asp Tyr Asp 210 215 220		
Ile Ala Asn Arg Arg Arg Cys Arg Gly Asn Gly Tyr Ile Asp Leu Asp 225 230 235 240		
Ala Thr Ala Met Gln Ser Asp Asp Phe Val Leu Ser Gly Arg Tyr Gly 245 250 255		
Val Arg Lys Val Lys Phe Pro Gly Ala Phe Gly Ser Ile Lys Tyr Leu 260 265 270		
Leu Asn Ile Gln Gly Asp Ala Trp Leu Asp Leu Ser Glu Val Thr Ala 275 280 285		
Tyr Arg Ser Tyr Gly Met Val Ile Gly Phe Trp Thr Asp Ser Lys Ser 290 295 300		

Pro Gln Leu Pro Thr Asp Phe Thr Gln Phe Asn Ser Ala Asn Cys Pro
305 310 315 320

Val Gln Thr Val Ile Ile Ile Pro Ser Leu
325 330

<210> 255
<211> 132
<212> PRT
<213> QB 240

<400> 255

Ala Lys Leu Glu Thr Val Thr Leu Gly Asn Ile Gly Arg Asp Gly Lys
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Gln Thr Leu Val Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly Val
20 25 30

Ala Ser Leu Ser Gln Ala Gly Ala Val Pro Ala Leu Glu Lys Arg Val
35 40 45

Thr Val Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys Val
50 55 60

Gln Val Lys Ile Gln Asn Pro Thr Ala Cys Thr Ala Asn Gly Ser Cys
65 70 75 80

Asp Pro Ser Val Thr Arg Gln Lys Tyr Ala Asp Val Thr Phe Ser Phe
85 90 95

Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu Leu
100 105 110

Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln Leu
115 120 125

Asn Pro Ala Tyr
130

<210> 256
<211> 132
<212> PRT
<213> Qb 243

<400> 256

Ala Lys Leu Glu Thr Val Thr Leu Gly Lys Ile Gly Lys Asp Gly Lys

1	5	10	15
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Gln Thr Leu Val Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly Val
20 25 30

Ala Ser Leu Ser Gln Ala Gly Ala Val Pro Ala Leu Glu Lys Arg Val
35 40 45

Thr Val Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys Val
50 55 60

Gln Val Lys Ile Gln Asn Pro Thr Ala Cys Thr Ala Asn Gly Ser Cys
65 70 75 80

Asp Pro Ser Val Thr Arg Gln Lys Tyr Ala Asp Val Thr Phe Ser Phe
85 90 95

Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu Leu
100 105 110

Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln Leu
115 120 125

Asn Pro Ala Tyr
130

<210> 257
<211> 132
<212> PRT
<213> Qb 250

<400> 257

Ala Arg Leu Glu Thr Val Thr Leu Gly Asn Ile Gly Arg Asp Gly Lys
1 5 10 15

Gln Thr Leu Val Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly Val
20 25 30

Ala Ser Leu Ser Gln Ala Gly Ala Val Pro Ala Leu Glu Lys Arg Val
35 40 45

Thr Val Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys Val
50 55 60

Gln Val Lys Ile Gln Asn Pro Thr Ala Cys Thr Ala Asn Gly Ser Cys
65 70 75 80

Asp Pro Ser Val Thr Arg Gln Lys Tyr Ala Asp Val Thr Phe Ser Phe
85 90 95

Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu Leu
100 105 110

Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln Leu
115 120 125

Asn Pro Ala Tyr
130

<210> 258
<211> 132
<212> PRT
<213> Qb 259

<400> 258

Ala Arg Leu Glu Thr Val Thr Leu Gly Asn Ile Gly Lys Asp Gly Arg
1 5 10 15

Gln Thr Leu Val Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly Val
20 25 30

Ala Ser Leu Ser Gln Ala Gly Ala Val Pro Ala Leu Glu Lys Arg Val
35 40 45

Thr Val Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys Val
50 55 60

Gln Val Lys Ile Gln Asn Pro Thr Ala Cys Thr Ala Asn Gly Ser Cys
65 70 75 80

Asp Pro Ser Val Thr Arg Gln Lys Tyr Ala Asp Val Thr Phe Ser Phe
85 90 95

Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu Leu
100 105 110

Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln Leu
115 120 125

Asn Pro Ala Tyr
130

<210> 259

<211> 132
<212> PRT
<213> Qb 251

<400> 259

Ala Lys Leu Glu Thr Val Thr Leu Gly Asn Ile Gly Lys Asp Gly Arg
1 5 10 15

Gln Thr Leu Val Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly Val
20 25 30

Ala Ser Leu Ser Gln Ala Gly Ala Val Pro Ala Leu Glu Lys Arg Val
35 40 45

Thr Val Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys Val
50 55 60

Gln Val Lys Ile Gln Asn Pro Thr Ala Cys Thr Ala Asn Gly Ser Cys
65 70 75 80

Asp Pro Ser Val Thr Arg Gln Lys Tyr Ala Asp Val Thr Phe Ser Phe
85 90 95

Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu Leu
100 105 110

Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln Leu
115 120 125

Asn Pro Ala Tyr
130

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<213> PH22

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<210> 264
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<210> 265
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<213> PH30

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<210> 269
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<210> 278
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<400> 278 40
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<400> 280

Ser Ser Met Pro Leu Cys Pro Ile Asp Glu Ala Ile Asp Lys Lys Ile
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Lys Gln Asp Phe Asn Ser Leu Phe Pro Asn Ala Ile Lys Asn Ile Gly
20 25 30

Leu Asn Cys Trp Thr Val Ser Ser Arg Gly Lys Leu Ala Ser Cys Pro
35 40 45

Glu Gly Thr Ala Val Leu Ser Cys Ser Cys Gly Ser Ala Cys Gly Ser
50 55 60

Trp Asp Ile Arg Glu Glu Lys Val Cys His Cys Gln Cys Ala Arg Ile
65 70 75 80

Asp Trp Thr Ala Ala Arg Cys Cys Lys Leu Gln Val Ala Ser Ser Leu
85 90 95

Ala Gly Gly Gly Gly Cys Gly Ile Glu Gly Arg
100 105

<210> 281

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> Resistin-C-EK construct

<400> 281

Ser Ser Met Pro Leu Cys Pro Ile Asp Glu Ala Ile Asp Lys Lys Ile
1 5 10 15

Lys Gln Asp Phe Asn Ser Leu Phe Pro Asn Ala Ile Lys Asn Ile Gly
20 25 30

Leu Asn Cys Trp Thr Val Ser Ser Arg Gly Lys Leu Ala Ser Cys Pro
35 40 45

Glu Gly Thr Ala Val Leu Ser Cys Ser Cys Gly Ser Ala Cys Gly Ser
50 55 60

Trp Asp Ile Arg Glu Glu Lys Val Cys His Cys Gln Cys Ala Arg Ile
65 70 75 80

Asp Trp Thr Ala Ala Arg Cys Cys Lys Leu Gln Val Ala Ser Ser Leu
85 90 95

Ala Gly Gly Gly Gly Cys Gly Asp Asp Asp Asp
100 105

<210> 282

<211> 103

<212> PRT

<213> Artificial Sequence

<220>

<223> Resistin-GCG construct

<400> 282

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1 5 10 15

Lys Gln Asp Phe Asn Ser Leu Phe Pro Asn Ala Ile Lys Asn Ile Gly
20 25 30

Leu Asn Cys Trp Thr Val Ser Ser Arg Gly Lys Leu Ala Ser Cys Pro
35 40 45

Glu Gly Thr Ala Val Leu Ser Cys Ser Cys Gly Ser Ala Cys Gly Ser
50 55 60

Trp Asp Ile Arg Glu Glu Lys Val Cys His Cys Gln Cys Ala Arg Ile
65 70 75 80

Asp Trp Thr Ala Ala Arg Cys Cys Lys Leu Gln Val Ala Ser Ser Leu
85 90 95

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<210> 283

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<210> 284
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<213> Artificial Sequence

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<220>
<223> 5'LT oligonucleotide

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<400> 284
cttgggtgccg caggatcag 19

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<210> 285
<211> 19
<212> DNA
<213> Artificial Sequence

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<220>
<223> 3'LT oligonucleotide

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<400> 285
cagatggctg tcacccac 19

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<210> 286
<211> 37
<212> DNA
<213> Artificial Sequence

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<220>
<223> 5'LT long-NheI oligonucleotide

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<400> 286
gcccgctagc ctgcgggtgg caggatcagg gacgtcg 37

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<210> 287
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> 5'LT short-NheI oligonucleotide

<400> 287
gcccgctagc ctgcggtggt tctccagctg cggattc

37

<210> 288
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> 3'LT stop-NotI oligonucleotide

<400> 288
caatgactgc ggccgcttac cccaccatca ccg

33

<210> 289
<211> 504
<212> PRT
<213> Artificial Sequence

<220>
<223> GST-EK-C-LT-beta-49-306 fusion protein

<400> 289

Ala Pro Leu Val Met Ser Pro Ile Leu Gly Tyr Trp Lys Ile Lys Gly
1 5 10 15

Leu Val Gln Pro Thr Arg Leu Leu Leu Glu Tyr Leu Glu Glu Lys Tyr
20 25 30

Glu Glu His Leu Tyr Glu Arg Asp Glu Gly Asp Lys Trp Arg Asn Lys
35 40 45

Lys Phe Glu Leu Gly Leu Glu Phe Pro Asn Leu Pro Tyr Tyr Ile Asp
50 55 60

Gly Asp Val Lys Leu Thr Gln Ser Met Ala Ile Ile Arg Tyr Ile Ala
65 70 75 80

Asp Lys His Asn Met Leu Gly Gly Cys Pro Lys Glu Arg Ala Glu Ile
85 90 95

Ser Met Leu Glu Gly Ala Val Leu Asp Ile Arg Tyr Gly Val Ser Arg
100 105 110

Ile Ala Tyr Ser Lys Asp Phe Glu Thr Leu Lys Val Asp Phe Leu Ser
115 120 125

Lys Leu Pro Glu Met Leu Lys Met Phe Glu Asp Arg Leu Cys His Lys
130 135 140

Thr Tyr Leu Asn Gly Asp His Val Thr His Pro Asp Phe Met Leu Tyr
145 150 155 160

Asp Ala Leu Asp Val Val Leu Tyr Met Asp Pro Met Cys Leu Asp Ala
165 170 175

Phe Pro Lys Leu Val Cys Phe Lys Lys Arg Ile Glu Ala Ile Pro Gln
180 185 190

Ile Asp Lys Tyr Leu Lys Ser Ser Lys Tyr Ile Ala Trp Pro Leu Gln
195 200 205

Gly Trp Gln Ala Thr Phe Gly Gly Gly Asp His Pro Pro Lys Ala Ser
210 215 220

Met Thr Gly Gly Gln Gln Met Gly Arg Asp Leu Tyr Asp Asp Asp Asp
225 230 235 240

Lys Leu Ala Cys Gly Gly Gln Asp Gln Gly Arg Arg Val Glu Lys Ile
245 250 255

Ile Gly Ser Gly Ala Gln Ala Gln Lys Arg Leu Asp Asp Ser Lys Pro
260 265 270

Ser Cys Ile Leu Pro Ser Pro Ser Ser Leu Ser Glu Thr Pro Asp Pro
275 280 285

Arg Leu His Pro Gln Arg Ser Asn Ala Ser Arg Asn Leu Ala Ser Thr
290 295 300

Ser Gln Gly Pro Val Ala Gln Ser Ser Arg Glu Ala Ser Ala Trp Met
305 310 315 320

Thr Ile Leu Ser Pro Ala Ala Asp Ser Thr Pro Asp Pro Gly Val Gln
325 330 335

Gln Leu Pro Lys Gly Glu Pro Glu Thr Asp Leu Asn Pro Glu Leu Pro
340 345 350

Ala Ala His Leu Ile Gly Ala Trp Met Ser Gly Gln Gly Leu Ser Trp
355 360 365

Glu Ala Ser Gln Glu Glu Ala Phe Leu Arg Ser Gly Ala Gln Phe Ser
370 375 380

Pro Thr His Gly Leu Ala Leu Pro Gln Asp Gly Val Tyr Tyr Leu Tyr
385 390 395 400

Cys His Val Gly Tyr Arg Gly Arg Thr Pro Pro Ala Gly Arg Ser Arg
405 410 415

Ala Arg Ser Leu Thr Leu Arg Ser Ala Leu Tyr Arg Ala Gly Gly Ala
420 425 430

Tyr Gly Arg Gly Ser Pro Glu Leu Leu Leu Glu Gly Ala Glu Thr Val
435 440 445

Thr Pro Val Val Asp Pro Ile Gly Tyr Gly Ser Leu Trp Tyr Thr Ser
450 455 460

Val Gly Phe Gly Gly Leu Ala Gln Leu Arg Ser Gly Glu Arg Val Tyr
465 470 475 480

Val Asn Ile Ser His Pro Asp Met Val Asp Tyr Arg Arg Gly Lys Thr
485 490 495

Phe Phe Gly Ala Val Met Val Gly
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<210> 290

<211> 427

<212> PRT

<213> Artificial Sequence

<220>

<223> GST-EK-C-LT_126-306 fusion protein

<400> 290

Ala Pro Leu Val Met Ser Pro Ile Leu Gly Tyr Trp Lys Ile Lys Gly
1 5 10 15

Leu Val Gln Pro Thr Arg Leu Leu Leu Glu Tyr Leu Glu Glu Lys Tyr
20 25 30

Glu Glu His Leu Tyr Glu Arg Asp Glu Gly Asp Lys Trp Arg Asn Lys
35 40 45

Lys Phe Glu Leu Gly Leu Glu Phe Pro Asn Leu Pro Tyr Tyr Ile Asp
50 55 60

Gly Asp Val Lys Leu Thr Gln Ser Met Ala Ile Ile Arg Tyr Ile Ala
65 70 75 80

Asp Lys His Asn Met Leu Gly Gly Cys Pro Lys Glu Arg Ala Glu Ile
85 90 95

Ser Met Leu Glu Gly Ala Val Leu Asp Ile Arg Tyr Gly Val Ser Arg
100 105 110

Ile Ala Tyr Ser Lys Asp Phe Glu Thr Leu Lys Val Asp Phe Leu Ser
115 120 125

Lys Leu Pro Glu Met Leu Lys Met Phe Glu Asp Arg Leu Cys His Lys
130 135 140

Thr Tyr Leu Asn Gly Asp His Val Thr His Pro Asp Phe Met Leu Tyr
145 150 155 160

Asp Ala Leu Asp Val Val Leu Tyr Met Asp Pro Met Cys Leu Asp Ala
165 170 175

Phe Pro Lys Leu Val Cys Phe Lys Lys Arg Ile Glu Ala Ile Pro Gln
180 185 190

Ile Asp Lys Tyr Leu Lys Ser Ser Lys Tyr Ile Ala Trp Pro Leu Gln
195 200 205

Gly Trp Gln Ala Thr Phe Gly Gly Gly Asp His Pro Pro Lys Ala Ser
210 215 220

Met Thr Gly Gly Gln Gln Met Gly Arg Asp Leu Tyr Asp Asp Asp Asp
225 230 235 240

Lys Leu Ala Cys Gly Gly Ser Pro Ala Ala Asp Ser Thr Pro Asp Pro
245 250 255

Gly Val Gln Gln Leu Pro Lys Gly Glu Pro Glu Thr Asp Leu Asn Pro
260 265 270

Glu Leu Pro Ala Ala His Leu Ile Gly Ala Trp Met Ser Gly Gln Gly
275 280 285

Leu Ser Trp Glu Ala Ser Gln Glu Glu Ala Phe Leu Arg Ser Gly Ala
290 295 300

Gln Phe Ser Pro Thr His Gly Leu Ala Leu Pro Gln Asp Gly Val Tyr
305 310 315 320

Tyr Leu Tyr Cys His Val Gly Tyr Arg Gly Arg Thr Pro Pro Ala Gly
325 330 335

Arg Ser Arg Ala Arg Ser Leu Thr Leu Arg Ser Ala Leu Tyr Arg Ala
340 345 350

Gly Gly Ala Tyr Gly Arg Gly Ser Pro Glu Leu Leu Leu Glu Gly Ala
355 360 365

Glu Thr Val Thr Pro Val Val Asp Pro Ile Gly Tyr Gly Ser Leu Trp
370 375 380

Tyr Thr Ser Val Gly Phe Gly Gly Leu Ala Gln Leu Arg Ser Gly Glu
385 390 395 400

Arg Val Tyr Val Asn Ile Ser His Pro Asp Met Val Asp Tyr Arg Arg
405 410 415

Gly Lys Thr Phe Phe Gly Ala Val Met Val Gly
420 425

<210> 291
<211> 311
<212> PRT
<213> Artificial Sequence

<220>
<223> his-myc-EK-C-LT_49-306 fusion protein

<400> 291

Ala Pro Leu Val His His His His His Gly Pro Leu Val Asp Val
1 5 10 15

Ala Ser Asn Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Ala Ser Met
20 25 30

Thr Gly Gly Gln Gln Met Gly Arg Asp Leu Tyr Asp Asp Asp Lys
35 40 45

Leu Ala Cys Gly Gly Gln Asp Gln Gly Arg Arg Val Glu Lys Ile Ile
50 55 60

Gly	Ser	Gly	Ala	Gln	Ala	Gln	Lys	Arg	Leu	Asp	Asp	Ser	Lys	Pro	Ser		
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Cys	Ile	Leu	Pro	Ser	Pro	Ser	Ser	Leu	Ser	Glu	Thr	Pro	Asp	Pro	Arg		
				85					90					95			
Leu	His	Pro	Gln	Arg	Ser	Asn	Ala	Ser	Arg	Asn	Leu	Ala	Ser	Thr	Ser		
			100					105					110				
Gln	Gly	Pro	Val	Ala	Gln	Ser	Ser	Arg	Glu	Ala	Ser	Ala	Trp	Met	Thr		
		115					120					125					
Ile	Leu	Ser	Pro	Ala	Ala	Asp	Ser	Thr	Pro	Asp	Pro	Gly	Val	Gln	Gln		
	130					135					140						
Leu	Pro	Lys	Gly	Glu	Pro	Glu	Thr	Asp	Leu	Asn	Pro	Glu	Leu	Pro	Ala		
145					150					155					160		
Ala	His	Leu	Ile	Gly	Ala	Trp	Met	Ser	Gly	Gln	Gly	Leu	Ser	Trp	Glu		
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Ala	Ser	Gln	Glu	Glu	Ala	Phe	Leu	Arg	Ser	Gly	Ala	Gln	Phe	Ser	Pro		
			180					185					190				
Thr	His	Gly	Leu	Ala	Leu	Pro	Gln	Asp	Gly	Val	Tyr	Tyr	Leu	Tyr	Cys		
		195					200					205					
His	Val	Gly	Tyr	Arg	Gly	Arg	Thr	Pro	Pro	Ala	Gly	Arg	Ser	Arg	Ala		
	210					215					220						
Arg	Ser	Leu	Thr	Leu	Arg	Ser	Ala	Leu	Tyr	Arg	Ala	Gly	Gly	Ala	Tyr		
225					230					235					240		
Gly	Arg	Gly	Ser	Pro	Glu	Leu	Leu	Leu	Glu	Gly	Ala	Glu	Thr	Val	Thr		
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Pro	Val	Val	Asp	Pro	Ile	Gly	Tyr	Gly	Ser	Leu	Trp	Tyr	Thr	Ser	Val		
			260					265					270				
Gly	Phe	Gly	Gly	Leu	Ala	Gln	Leu	Arg	Ser	Gly	Glu	Arg	Val	Tyr	Val		
		275					280					285					
Asn	Ile	Ser	His	Pro	Asp	Met	Val	Asp	Tyr	Arg	Arg	Gly	Lys	Thr	Phe		
	290					295					300						

Phe Gly Ala Val Met Val Gly
305 310

<210> 292

<211> 234

<212> PRT

<213> Artificial Sequence

<220>

<223> his-myc-EK-C-LT_126-306 fusion protein

<400> 292

Ala Pro Leu Val His His His His His His Gly Pro Leu Val Asp Val
1 5 10 15

Ala Ser Asn Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Ala Ser Met
20 25 30

Thr Gly Gly Gln Gln Met Gly Arg Asp Leu Tyr Asp Asp Asp Asp Lys
35 40 45

Leu Ala Cys Gly Gly Ser Pro Ala Ala Asp Ser Thr Pro Asp Pro Gly
50 55 60

Val Gln Gln Leu Pro Lys Gly Glu Pro Glu Thr Asp Leu Asn Pro Glu
65 70 75 80

Leu Pro Ala Ala His Leu Ile Gly Ala Trp Met Ser Gly Gln Gly Leu
85 90 95

Ser Trp Glu Ala Ser Gln Glu Glu Ala Phe Leu Arg Ser Gly Ala Gln
100 105 110

Phe Ser Pro Thr His Gly Leu Ala Leu Pro Gln Asp Gly Val Tyr Tyr
115 120 125

Leu Tyr Cys His Val Gly Tyr Arg Gly Arg Thr Pro Pro Ala Gly Arg
130 135 140

Ser Arg Ala Arg Ser Leu Thr Leu Arg Ser Ala Leu Tyr Arg Ala Gly
145 150 155 160

Gly Ala Tyr Gly Arg Gly Ser Pro Glu Leu Leu Leu Glu Gly Ala Glu
165 170 175

Thr Val Thr Pro Val Val Asp Pro Ile Gly Tyr Gly Ser Leu Trp Tyr
180 185 190

Thr Ser Val Gly Phe Gly Gly Leu Ala Gln Leu Arg Ser Gly Glu Arg
195 200 205

Val Tyr Val Asn Ile Ser His Pro Asp Met Val Asp Tyr Arg Arg Gly
210 215 220

Lys Thr Phe Phe Gly Ala Val Met Val Gly
225 230

<210> 293
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> MCS-1F primer

<400> 293 43
tatggatccg gctagcgctc gagggtttaa acggcggccg cat

<210> 294
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> MCS-1R primer

<400> 294 45
tcgaatgcgg ccgccgttta aaccctcgag cgctagccgg atcca

<210> 295
<211> 58
<212> DNA
<213> Artificial Sequence

<220>
<223> Bamhis6-EK-Nhe-F oligonucleotide

<400> 295 58
gatccacacc accaccacca ccacggttct ggtgacgacg atgacaaagc gctagccc

<210> 296
<211> 58
<212> DNA
<213> Artificial Sequence

<220>
<223> Bamhis6-EK-Nhe-R oligonucleotide

<400> 296 58
tcgagggcta gcgctttgtc atcgctcgta ccagaaccgt ggtgggtggtg gtggtgtg

<210> 297
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> oligo1F-C-glycine-linker

<400> 297
tcgagggtgg tgggtggtgg tgcggttaat aagtttaaac gc 42

<210> 298
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> oligo1R-C-glycine-linker

<400> 298
ggccgcgttt aaacttatta accgcaacca ccaccaccac cc 42

<210> 299
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> oligo1F-C-gamma1-linker

<400> 299
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<210> 300
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> oligo1R-C-gamma1-linker

<400> 300
ggccgcgttt aaacttatta accacacggc ggagaggtgt gggttttatc c 51

<210> 301
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> oligo1FA-C-gamma3-linker

<400> 301
tcgagccgaa accgtctacc ccgccgggtt cttctg 36

<210> 302
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> oligo1RA-C-gamma3-linker

<400> 302
caccaccaga agaaccggc ggggtagacg gtttcggc 38

<210> 303
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> oligo2FB-C-gamma3-linker

<400> 303
gtggtgctcc gggtggttgc ggtaataag tttaaacgc 39

<210> 304
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> oligo2RB-C-gamma3-linker

<400> 304
ggccgcgttt aaacttatta accgcaacca cccggag 37

<210> 305
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> rMIF-F oligonucleotide

<400> 305
ggaattccat atgcctatgt tcatcgtgaa cac 33

<210> 306
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> rMIF-Xho-R oligonucleotide

<400> 306
cccgctcgag agcgaagggtg gaaccgttc 29

<210> 307

<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> rMIF-C1

<400> 307

Met Pro Met Phe Ile Val Asn Thr Asn Val Pro Arg Ala Ser Val Pro
1 5 10 15

Glu Gly Phe Leu Ser Glu Leu Thr Gln Gln Leu Ala Gln Ala Thr Gly
20 25 30

Lys Pro Ala Gln Tyr Ile Ala Val His Val Val Pro Asp Gln Leu Met
35 40 45

Thr Phe Ser Gly Thr Ser Asp Pro Cys Ala Leu Cys Ser Leu His Ser
50 55 60

Ile Gly Lys Ile Gly Gly Ala Gln Asn Arg Asn Tyr Ser Lys Leu Leu
65 70 75 80

Cys Gly Leu Leu Ser Asp Arg Leu His Ile Ser Pro Asp Arg Val Tyr
85 90 95

Ile Asn Tyr Tyr Asp Met Asn Ala Ala Asn Val Gly Trp Asn Gly Ser
100 105 110

Thr Phe Ala Leu Glu Gly Gly Gly Gly Cys Gly
115 120

<210> 308
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> rMIF-C2

<400> 308

Met Pro Met Phe Ile Val Asn Thr Asn Val Pro Arg Ala Ser Val Pro
1 5 10 15

Glu Gly Phe Leu Ser Glu Leu Thr Gln Gln Leu Ala Gln Ala Thr Gly
20 25 30

Lys Pro Ala Gln Tyr Ile Ala Val His Val Val Pro Asp Gln Leu Met
35 40 45

Thr Phe Ser Gly Thr Ser Asp Pro Cys Ala Leu Cys Ser Leu His Ser
50 55 60

Ile Gly Lys Ile Gly Gly Ala Gln Asn Arg Asn Tyr Ser Lys Leu Leu
65 70 75 80

Cys Gly Leu Leu Ser Asp Arg Leu His Ile Ser Pro Asp Arg Val Tyr
85 90 95

Ile Asn Tyr Tyr Asp Met Asn Ala Ala Asn Val Gly Trp Asn Gly Ser
100 105 110

Thr Phe Ala Leu Glu Asp Lys Thr His Thr Ser Pro Pro Cys Gly
115 120 125

<210> 309
<211> 135
<212> PRT
<213> Artificial Sequence

<220>
<223> rMIF-C3

<400> 309

Met Pro Met Phe Ile Val Asn Thr Asn Val Pro Arg Ala Ser Val Pro
1 5 10 15

Glu Gly Phe Leu Ser Glu Leu Thr Gln Gln Leu Ala Gln Ala Thr Gly
20 25 30

Lys Pro Ala Gln Tyr Ile Ala Val His Val Val Pro Asp Gln Leu Met
35 40 45

Thr Phe Ser Gly Thr Ser Asp Pro Cys Ala Leu Cys Ser Leu His Ser
50 55 60

Ile Gly Lys Ile Gly Gly Ala Gln Asn Arg Asn Tyr Ser Lys Leu Leu
65 70 75 80

Cys Gly Leu Leu Ser Asp Arg Leu His Ile Ser Pro Asp Arg Val Tyr
85 90 95

Ile Asn Tyr Tyr Asp Met Asn Ala Ala Asn Val Gly Trp Asn Gly Ser
100 105 110

Thr Phe Ala Leu Glu Pro Lys Pro Ser Thr Pro Pro Gly Ser Ser Gly

115 120 125

Gly Ala Pro Gly Gly Cys Gly
130 135

<210> 310
<211> 124
<212> PRT
<213> Homo sapiens

<400> 310

Met Pro Met Phe Ile Val Asn Thr Asn Val Pro Arg Ala Ser Val Pro
1 5 10 15

Asp Gly Phe Leu Ser Glu Leu Thr Gln Gln Leu Ala Gln Ala Thr Gly
20 25 30

Lys Pro Pro Gln Tyr Ile Ala Val His Val Val Pro Asp Gln Leu Met
35 40 45

Ala Phe Gly Gly Ser Ser Glu Pro Cys Ala Leu Cys Ser Leu His Ser
50 55 60

Ile Gly Lys Ile Gly Gly Ala Gln Asn Arg Ser Tyr Ser Lys Leu Leu
65 70 75 80

Cys Gly Leu Leu Ala Glu Arg Leu Arg Ile Ser Pro Asp Arg Val Tyr
85 90 95

Ile Asn Tyr Tyr Asp Met Asn Ala Ala Asn Val Gly Trp Asn Asn Ser
100 105 110

Thr Phe Ala Leu Glu Gly Gly Gly Gly Gly Cys Gly
115 120

<210> 311
<211> 123
<212> PRT
<213> Homo sapiens

<400> 311

Pro Met Phe Ile Val Asn Thr Asn Val Pro Arg Ala Ser Val Pro Asp
1 5 10 15

Gly Phe Leu Ser Glu Leu Thr Gln Gln Leu Ala Gln Ala Thr Gly Lys
20 25 30

Pro Pro Gln Tyr Ile Ala Val His Val Val Pro Asp Gln Leu Met Ala
35 40 45

Phe Gly Gly Ser Ser Glu Pro Cys Ala Leu Cys Ser Leu His Ser Ile
50 55 60

Gly Lys Ile Gly Gly Ala Gln Asn Arg Ser Tyr Ser Lys Leu Leu Cys
65 70 75 80

Gly Leu Leu Ala Glu Arg Leu Arg Ile Ser Pro Asp Arg Val Tyr Ile
85 90 95

Asn Tyr Tyr Asp Met Asn Ala Ala Asn Val Gly Trp Asn Asn Ser Thr
100 105 110

Phe Ala Leu Glu Gly Gly Gly Gly Gly Cys Gly
115 120

<210> 312
<211> 127
<212> PRT
<213> Homo sapiens

<400> 312

Met Pro Met Phe Ile Val Asn Thr Asn Val Pro Arg Ala Ser Val Pro
1 5 10 15

Asp Gly Phe Leu Ser Glu Leu Thr Gln Gln Leu Ala Gln Ala Thr Gly
20 25 30

Lys Pro Pro Gln Tyr Ile Ala Val His Val Val Pro Asp Gln Leu Met
35 40 45

Ala Phe Gly Gly Ser Ser Glu Pro Cys Ala Leu Cys Ser Leu His Ser
50 55 60

Ile Gly Lys Ile Gly Gly Ala Gln Asn Arg Ser Tyr Ser Lys Leu Leu
65 70 75 80

Cys Gly Leu Leu Ala Glu Arg Leu Arg Ile Ser Pro Asp Arg Val Tyr
85 90 95

Ile Asn Tyr Tyr Asp Met Asn Ala Ala Asn Val Gly Trp Asn Asn Ser
100 105 110

Thr Phe Ala Leu Glu Asp Lys Thr His Thr Ser Pro Pro Cys Gly
115 120 125

<210> 313
<211> 126
<212> PRT
<213> Homo sapiens

<400> 313

Pro Met Phe Ile Val Asn Thr Asn Val Pro Arg Ala Ser Val Pro Asp
1 5 10 15

Gly Phe Leu Ser Glu Leu Thr Gln Gln Leu Ala Gln Ala Thr Gly Lys
20 25 30

Pro Pro Gln Tyr Ile Ala Val His Val Val Pro Asp Gln Leu Met Ala
35 40 45

Phe Gly Gly Ser Ser Glu Pro Cys Ala Leu Cys Ser Leu His Ser Ile
50 55 60

Gly Lys Ile Gly Gly Ala Gln Asn Arg Ser Tyr Ser Lys Leu Leu Cys
65 70 75 80

Gly Leu Leu Ala Glu Arg Leu Arg Ile Ser Pro Asp Arg Val Tyr Ile
85 90 95

Asn Tyr Tyr Asp Met Asn Ala Ala Asn Val Gly Trp Asn Asn Ser Thr
100 105 110

Phe Ala Leu Glu Asp Lys Thr His Thr Ser Pro Pro Cys Gly
115 120 125

<210> 314
<211> 135
<212> PRT
<213> Homo sapiens

<400> 314

Met Pro Met Phe Ile Val Asn Thr Asn Val Pro Arg Ala Ser Val Pro
1 5 10 15

Asp Gly Phe Leu Ser Glu Leu Thr Gln Gln Leu Ala Gln Ala Thr Gly
20 25 30

Lys Pro Pro Gln Tyr Ile Ala Val His Val Val Pro Asp Gln Leu Met
35 40 45

Ala Phe Gly Gly Ser Ser Glu Pro Cys Ala Leu Cys Ser Leu His Ser

50 55 60

Ile Gly Lys Ile Gly Gly Ala Gln Asn Arg Ser Tyr Ser Lys Leu Leu
65 70 75 80

Cys Gly Leu Leu Ala Glu Arg Leu Arg Ile Ser Pro Asp Arg Val Tyr
85 90 95

Ile Asn Tyr Tyr Asp Met Asn Ala Ala Asn Val Gly Trp Asn Asn Ser
100 105 110

Thr Phe Ala Leu Glu Pro Lys Pro Ser Thr Pro Pro Gly Ser Ser Gly
115 120 125

Gly Ala Pro Gly Gly Cys Gly
130 135

<210> 315
<211> 134
<212> PRT
<213> Homo sapiens

<400> 315

Pro Met Phe Ile Val Asn Thr Asn Val Pro Arg Ala Ser Val Pro Asp
1 5 10 15

Gly Phe Leu Ser Glu Leu Thr Gln Gln Leu Ala Gln Ala Thr Gly Lys
20 25 30

Pro Pro Gln Tyr Ile Ala Val His Val Val Pro Asp Gln Leu Met Ala
35 40 45

Phe Gly Gly Ser Ser Glu Pro Cys Ala Leu Cys Ser Leu His Ser Ile
50 55 60

Gly Lys Ile Gly Gly Ala Gln Asn Arg Ser Tyr Ser Lys Leu Leu Cys
65 70 75 80

Gly Leu Leu Ala Glu Arg Leu Arg Ile Ser Pro Asp Arg Val Tyr Ile
85 90 95

Asn Tyr Tyr Asp Met Asn Ala Ala Asn Val Gly Trp Asn Asn Ser Thr
100 105 110

Phe Ala Leu Glu Pro Lys Pro Ser Thr Pro Pro Gly Ser Ser Gly Gly
115 120 125

Ala Pro Gly Gly Cys Gly
130

<210> 316
<211> 62
<212> DNA
<213> Artificial Sequence

<220>
<223> RANKL-UP oligonucleotide

<400> 316
ctgccagggg cccgggtgcg gcgggtggcca tcatcaccac catcaccagc gcttctcagg 60
ag 62

<210> 317
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> RANKL-down oligonucleotide

<400> 317
ccgctcgagt tagtctatgt cctgaacttt gaaag 35

<210> 318
<211> 419
<212> PRT
<213> Artificial Sequence

<220>
<223> GST-PS-C-RANKL construct

<400> 318

Met Ser Pro Ile Leu Gly Tyr Trp Lys Ile Lys Gly Leu Val Gln Pro
1 5 10 15

Thr Arg Leu Leu Leu Glu Tyr Leu Glu Glu Lys Tyr Glu Glu His Leu
20 25 30

Tyr Glu Arg Asp Glu Gly Asp Lys Trp Arg Asn Lys Lys Phe Glu Leu
35 40 45

Gly Leu Glu Phe Pro Asn Leu Pro Tyr Tyr Ile Asp Gly Asp Val Lys
50 55 60

Leu Thr Gln Ser Met Ala Ile Ile Arg Tyr Ile Ala Asp Lys His Asn
65 70 75 80

Met Leu Gly Gly Cys Pro Lys Glu Arg Ala Glu Ile Ser Met Leu Glu
85 90 95

Gly Ala Val Leu Asp Ile Arg Tyr Gly Val Ser Arg Ile Ala Tyr Ser
100 105 110

Lys Asp Phe Glu Thr Leu Lys Val Asp Phe Leu Ser Lys Leu Pro Glu
115 120 125

Met Leu Lys Met Phe Glu Asp Arg Leu Cys His Lys Thr Tyr Leu Asn
130 135 140

Gly Asp His Val Thr His Pro Asp Phe Met Leu Tyr Asp Ala Leu Asp
145 150 155 160

Val Val Leu Tyr Met Asp Pro Met Cys Leu Asp Ala Phe Pro Lys Leu
165 170 175

Val Cys Phe Lys Lys Arg Ile Glu Ala Ile Pro Gln Ile Asp Lys Tyr
180 185 190

Leu Lys Ser Ser Lys Tyr Ile Ala Trp Pro Leu Gln Gly Trp Gln Ala
195 200 205

Thr Phe Gly Gly Gly Asp His Pro Pro Lys Ser Asp Leu Glu Val Leu
210 215 220

Phe Gln Gly Pro Gly Cys Gly Gly Gly His His His His His His Gln
225 230 235 240

Arg Phe Ser Gly Ala Pro Ala Met Met Glu Gly Ser Trp Leu Asp Val
245 250 255

Ala Gln Arg Gly Lys Pro Glu Ala Gln Pro Phe Ala His Leu Thr Ile
260 265 270

Asn Ala Ala Ser Ile Pro Ser Gly Ser His Lys Val Thr Leu Ser Ser
275 280 285

Trp Tyr His Asp Arg Gly Trp Ala Lys Ile Ser Asn Met Thr Leu Ser
290 295 300

Asn Gly Lys Leu Arg Val Asn Gln Asp Gly Phe Tyr Tyr Leu Tyr Ala
305 310 315 320

Asn Ile Cys Phe Arg His His Glu Thr Ser Gly Ser Val Pro Thr Asp

325 330 335

Tyr Leu Gln Leu Met Val Tyr Val Val Lys Thr Ser Ile Lys Ile Pro
340 345 350

Ser Ser His Asn Leu Met Lys Gly Gly Ser Thr Lys Asn Trp Ser Gly
355 360 365

Asn Ser Glu Phe His Phe Tyr Ser Ile Asn Val Gly Gly Phe Phe Lys
370 375 380

Leu Arg Ala Gly Glu Glu Ile Ser Ile Gln Val Ser Asn Pro Ser Leu
385 390 395 400

Leu Asp Pro Asp Gln Asp Ala Thr Tyr Phe Gly Ala Phe Lys Val Gln
405 410 415

Asp Ile Asp

<210> 319
<211> 1269
<212> DNA
<213> Artificial Sequence

<220>
<223> GST-PS-C-RANKL construct

<400> 319
atgtccccta tactaggta ttggaaaatt aagggccttg tgcaaccac tcgacttctt 60
ttggaatatc ttgaagaaaa atatgaagag catttgatg agcgcgatga aggtgataaa 120
tggcgaaaca aaaagtttga attgggtttg gagtttccca atcttcctta ttatattgat 180
ggatgatgta aattaacaca gtctatggcc atcatagctt atatagctga caagcacaac 240
atgttgggtg gttgtccaaa agagcgtgca gagatttcaa tgcttgaagg agcggttttg 300
gatattagat acggtgtttc gagaattgca tatagtaaag actttgaaac tctcaaagtt 360
gattttctta gcaagctacc tgaaatgctg aaaatgttcg aagatcgttt atgtcataaa 420
acatatttaa atggtgatca tgtaacccat cctgacttca tggtgatga cgctcttgat 480
gttgttttat acatggaccc aatgtgcctg gatgcgttcc caaaattagt ttgttttaaa 540
aaacgtattg aagctatccc acaaattgat aagtacttga aatccagcaa gtatatagca 600
tggcctttgc agggctggca agccacgttt ggtgggtggcg accatcctcc aaaatcggat 660
ctggaagtgc tgttccaggg gcccggtgac ggcgggtggcc atcatcacca ccaccagag 720
cgcttctcag gagctccagc tatgatggaa ggctcatggt tggatgtggc ccagcgaggc 780

aagcctgagg cccagccatt tgcacacctc accatcaatg ctgccagcat cccatcgggt 840
 tcccatáaag tcactctgtc ctcttggtac cacgatcgag gctgggcaa gatctctaac 900
 atgacgttaa gcaacggaaa actaagggtt aaccaagatg gcttctatta cctgtacgcc 960
 aacatttgct ttcggcatca tgaaacatcg ggaagcgtag ctacagacta tcttcagctg 1020
 atggtgtatg tcgttaaaac cagcatcaaa atcccaagtt ctcataacct gatgaaagga 1080
 gggagcacga aaaactgggc gggcaattct gaattccact tttattccat aaatgttggg 1140
 ggatttttca agctccgagc tgggtgaagaa attagcattc aggtgtccaa cccttcctg 1200
 ctggatccgg atcaagatgc gacgtacttt ggggctttca aagttcagga catagactaa 1260
 ctcgagcgg 1269

<210> 320

<211> 185

<212> PRT

<213> Homo sapiens

<400> 320

Gly Cys Gly Gly Gln His Ile Arg Ala Glu Lys Ala Met Val Asp
 1 5 10 15

Gly Ser Trp Leu Asp Leu Ala Lys Arg Ser Lys Leu Glu Ala Gln Pro
 20 25 30

Phe Ala His Leu Thr Ile Asn Ala Thr Asp Ile Pro Ser Gly Ser His
 35 40 45

Lys Val Ser Leu Ser Ser Trp Tyr His Asp Arg Gly Trp Ala Lys Ile
 50 55 60

Ser Asn Met Thr Phe Ser Asn Gly Lys Leu Ile Val Asn Gln Asp Gly
 65 70 75 80

Phe Tyr Tyr Leu Tyr Ala Asn Ile Cys Phe Arg His His Glu Thr Ser
 85 90 95

Gly Asp Leu Ala Thr Glu Tyr Leu Gln Leu Met Val Tyr Val Thr Lys
 100 105 110

Thr Ser Ile Lys Ile Pro Ser Ser His Thr Leu Met Lys Gly Gly Ser
 115 120 125

Thr Lys Tyr Trp Ser Gly Asn Ser Glu Phe His Phe Tyr Ser Ile Asn
 130 135 140

Val Gly Gly Phe Phe Lys Leu Arg Ser Gly Glu Glu Ile Ser Ile Glu
145 150 155 160

Val Ser Asn Pro Ser Leu Leu Asp Pro Asp Gln Asp Ala Thr Tyr Phe
165 170 175

Gly Ala Phe Lys Val Arg Asp Ile Asp
180 185

<210> 321
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer 5'PrP-BamHI

<400> 321
cgggatccca ccatggtggg gggccttgg 29

<210> 322
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer 3'PrP-NheI

<400> 322
ctagctagcc tggatcttct cccg 24

<210> 323
<211> 350
<212> PRT
<213> Artificial Sequence

<220>
<223> mPrPt-EK-Fc construct

<400> 323

Met Val Gly Gly Leu Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg
1 5 10 15

Pro Met Ile His Phe Gly Asn Asp Trp Glu Asp Arg Tyr Tyr Arg Glu
20 25 30

Asn Met Tyr Arg Tyr Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Gln
35 40 45

Tyr Ser Asn Gln Asn Asn Phe Val His Asp Cys Val Asn Ile Thr Ile

50		55		60
Lys Gln His Thr Val	Thr Thr Thr Thr	Lys Gly Glu Asn Phe Thr Glu		
65	70	75	80	
Thr Asp Val Lys Met Met Glu Arg Val	Val Glu Gln Met Cys Val Thr			
	85	90	95	
Gln Tyr Gln Lys Glu Ser Gln Ala Tyr	Tyr Asp Gly Arg Ser Arg Leu			
	100	105	110	
Ala Gly Gly Gly Gly Cys Gly Asp Asp Asp Asp Lys Leu Thr His Thr				
	115	120	125	
Cys Pro Pro Cys Pro Ala Pro Glu Ala Glu Gly Ala Pro Ser Val Phe				
	130	135	140	
Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro				
	145	150	155	160
Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val				
	165	170	175	
Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr				
	180	185	190	
Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val				
	195	200	205	
Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys				
	210	215	220	
Lys Val Ser Asn Lys Ala Leu Pro Ala Ser Ile Glu Lys Thr Ile Ser				
	225	230	235	240
Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro				
	245	250	255	
Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val				
	260	265	270	
Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly				
	275	280	285	
Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp				
	290	295	300	

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
305 310 315 320

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
325 330 335

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
340 345 350

<210> 324
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> mPrPt construct

<400> 324

Met Val Gly Gly Leu Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg
1 5 10 15

Pro Met Ile His Phe Gly Asn Asp Trp Glu Asp Arg Tyr Tyr Arg Glu
20 25 30

Asn Met Tyr Arg Tyr Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Gln
35 40 45

Tyr Ser Asn Gln Asn Asn Phe Val His Asp Cys Val Asn Ile Thr Ile
50 55 60

Lys Gln His Thr Val Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu
65 70 75 80

Thr Asp Val Lys Met Met Glu Arg Val Val Glu Gln Met Cys Val Thr
85 90 95

Gln Tyr Gln Lys Glu Ser Gln Ala Tyr Tyr Asp Gly Arg Ser Arg Leu
100 105 110

Ala Gly Gly Gly Gly Cys Gly Asp Asp Asp Asp Lys
115 120

<210> 325
<211> 102
<212> PRT
<213> Artificial Sequence

<220>

<223> human resistin-C-Xa construct

<400> 325

Ser Ser Lys Thr Leu Cys Ser Met Glu Glu Ala Ile Asn Glu Arg Ile
1 5 10 15

Gln Glu Val Ala Gly Ser Leu Ile Phe Arg Ala Ile Ser Ser Ile Gly
20 25 30

Leu Glu Cys Gln Ser Val Thr Ser Arg Gly Asp Leu Ala Thr Cys Pro
35 40 45

Arg Gly Phe Ala Val Thr Gly Cys Thr Cys Gly Ser Ala Cys Gly Ser
50 55 60

Trp Asp Val Arg Ala Glu Thr Thr Cys His Cys Gln Cys Ala Gly Met
65 70 75 80

Asp Trp Thr Gly Ala Arg Cys Cys Arg Val Gln Pro Gly Gly Gly Gly
85 90 95

Cys Gly Ile Glu Gly Arg
100

<210> 326

<211> 103

<212> PRT

<213> Artificial Sequence

<220>

<223> human resistin-C-EK construct

<400> 326

Ser Ser Lys Thr Leu Cys Ser Met Glu Glu Ala Ile Asn Glu Arg Ile
1 5 10 15

Gln Glu Val Ala Gly Ser Leu Ile Phe Arg Ala Ile Ser Ser Ile Gly
20 25 30

Leu Glu Cys Gln Ser Val Thr Ser Arg Gly Asp Leu Ala Thr Cys Pro
35 40 45

Arg Gly Phe Ala Val Thr Gly Cys Thr Cys Gly Ser Ala Cys Gly Ser
50 55 60

Trp Asp Val Arg Ala Glu Thr Thr Cys His Cys Gln Cys Ala Gly Met
65 70 75 80

Asp Trp Thr Gly Ala Arg Cys Cys Arg Val Gln Pro Gly Gly Gly Gly
85 90 95

Cys Gly Asp Asp Asp Asp Lys
100

<210> 327

<211> 98

<212> PRT

<213> Artificial Sequence

<220>

<223> human resisititn-C construct

<400> 327

Ser Ser Lys Thr Leu Cys Ser Met Glu Glu Ala Ile Asn Glu Arg Ile
1 5 10 15

Gln Glu Val Ala Gly Ser Leu Ile Phe Arg Ala Ile Ser Ser Ile Gly
20 25 30

Leu Glu Cys Gln Ser Val Thr Ser Arg Gly Asp Leu Ala Thr Cys Pro
35 40 45

Arg Gly Phe Ala Val Thr Gly Cys Thr Cys Gly Ser Ala Cys Gly Ser
50 55 60

Trp Asp Val Arg Ala Glu Thr Thr Cys His Cys Gln Cys Ala Gly Met
65 70 75 80

Asp Trp Thr Gly Ala Arg Cys Cys Arg Val Gln Pro Gly Gly Gly Gly
85 90 95

Cys Gly

<210> 328

<211> 132

<212> PRT

<213> Artificial Sequence

<220>

<223> mouse C-IL-13-F construct

<400> 328

Ala Asp Pro Gly Cys Gly Gly Gly Gly Gly Leu Ala Gly Pro Val Pro
1 5 10 15

Arg Ser Val Ser Leu Pro Leu Thr Leu Lys Glu Leu Ile Glu Glu Leu
20 25 30

Ser Asn Ile Thr Gln Asp Gln Thr Pro Leu Cys Asn Gly Ser Met Val
35 40 45

Trp Ser Val Asp Leu Ala Ala Gly Gly Phe Cys Val Ala Leu Asp Ser
50 55 60

Leu Thr Asn Ile Ser Asn Cys Asn Ala Ile Tyr Arg Thr Gln Arg Ile
65 70 75 80

Leu His Gly Leu Cys Asn Arg Lys Ala Pro Thr Thr Val Ser Ser Leu
85 90 95

Pro Asp Thr Lys Ile Glu Val Ala His Phe Ile Thr Lys Leu Leu Ser
100 105 110

Tyr Thr Lys Gln Leu Phe Arg His Gly Pro Phe Leu Glu Val Leu Ala
115 120 125

Ile Glu Gly Arg
130

<210> 329

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> mouse C-IL-13-S construct

<400> 329

Leu Ala Cys Gly Gly Gly Gly Gly Gly Pro Val Pro Arg Ser Val Ser
1 5 10 15

Leu Pro Leu Thr Leu Lys Glu Leu Ile Glu Glu Leu Ser Asn Ile Thr
20 25 30

Gln Asp Gln Thr Pro Leu Cys Asn Gly Ser Met Val Trp Ser Val Asp
35 40 45

Leu Ala Ala Gly Gly Phe Cys Val Ala Leu Asp Ser Leu Thr Asn Ile
50 55 60

Ser Asn Cys Asn Ala Ile Tyr Arg Thr Gln Arg Ile Leu His Gly Leu
65 70 75 80

Cys Asn Arg Lys Ala Pro Thr Thr Val Ser Ser Leu Pro Asp Thr Lys
85 90 95

Ile Glu Val Ala His Phe Ile Thr Lys Leu Leu Ser Tyr Thr Lys Gln
100 105 110

Leu Phe Arg His Gly Pro Phe
115

<210> 330

<211> 133

<212> PRT

<213> Artificial Sequence

<220>

<223> human C-IL-13-F construct

<400> 330

Ala Asp Pro Gly Cys Gly Gly Gly Gly Gly Leu Ala Gly Pro Val Pro
1 5 10 15

Pro Ser Thr Ala Leu Arg Glu Leu Ile Glu Glu Leu Val Asn Ile Thr
20 25 30

Gln Asn Gln Lys Ala Pro Leu Cys Asn Gly Ser Met Val Trp Ser Ile
35 40 45

Asn Leu Thr Ala Gly Met Tyr Cys Ala Ala Leu Glu Ser Leu Ile Asn
50 55 60

Val Ser Gly Cys Ser Ala Ile Glu Lys Thr Gln Arg Met Leu Ser Gly
65 70 75 80

Phe Cys Pro His Lys Val Ser Ala Gly Gln Phe Ser Ser Leu His Val
85 90 95

Arg Asp Thr Lys Ile Glu Val Ala Gln Phe Val Lys Asp Leu Leu Leu
100 105 110

His Leu Lys Lys Leu Phe Arg Glu Gly Arg Phe Asn Leu Glu Val Leu
115 120 125

Ala Ile Glu Gly Arg
130

<210> 331

<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> human C-IL-13-S construct

<400> 331

Leu Ala Cys Gly Gly Gly Gly Gly Gly Pro Val Pro Pro Ser Thr Ala
1 5 10 15

Leu Arg Glu Leu Ile Glu Glu Leu Val Asn Ile Thr Gln Asn Gln Lys
20 25 30

Ala Pro Leu Cys Asn Gly Ser Met Val Trp Ser Ile Asn Leu Thr Ala
35 40 45

Gly Met Tyr Cys Ala Ala Leu Glu Ser Leu Ile Asn Val Ser Gly Cys
50 55 60

Ser Ala Ile Glu Lys Thr Gln Arg Met Leu Ser Gly Phe Cys Pro His
65 70 75 80

Lys Val Ser Ala Gly Gln Phe Ser Ser Leu His Val Arg Asp Thr Lys
85 90 95

Ile Glu Val Ala Gln Phe Val Lys Asp Leu Leu Leu His Leu Lys Lys
100 105 110

Leu Phe Arg Glu Gly Arg Phe Asn
115 120

<210> 332
<211> 136
<212> PRT
<213> Artificial Sequence

<220>
<223> mouse C-IL-5-E construct

<400> 332

Ala Leu Val Gly Cys Gly Gly Pro Lys Pro Ser Thr Pro Pro Gly Ser
1 5 10 15

Ser Gly Gly Ala Pro Ala Ser Met Glu Ile Pro Met Ser Thr Val Val
20 25 30

Lys Glu Thr Leu Thr Gln Leu Ser Ala His Arg Ala Leu Leu Thr Ser
35 40 45

Asn Glu Thr Met Arg Leu Pro Val Pro Thr His Lys Asn His Gln Leu
50 55 60

Cys Ile Gly Glu Ile Phe Gln Gly Leu Asp Ile Leu Lys Asn Gln Thr
65 70 75 80

Val Arg Gly Gly Thr Val Glu Met Leu Phe Gln Asn Leu Ser Leu Ile
85 90 95

Lys Lys Tyr Ile Asp Arg Gln Lys Glu Lys Cys Gly Glu Glu Arg Arg
100 105 110

Arg Thr Arg Gln Phe Leu Asp Tyr Leu Gln Glu Phe Leu Gly Val Met
115 120 125

Ser Thr Glu Trp Ala Met Glu Gly
130 135

<210> 333

<211> 134

<212> PRT

<213> Artificial Sequence

<220>

<223> mouse C-IL-5-F construct

<400> 333

Ala Asp Pro Gly Cys Gly Gly Gly Gly Gly Leu Ala Met Glu Ile Pro
1 5 10 15

Met Ser Thr Val Val Lys Glu Thr Leu Thr Gln Leu Ser Ala His Arg
20 25 30

Ala Leu Leu Thr Ser Asn Glu Thr Met Arg Leu Pro Val Pro Thr His
35 40 45

Lys Asn His Gln Leu Cys Ile Gly Glu Ile Phe Gln Gly Leu Asp Ile
50 55 60

Leu Lys Asn Gln Thr Val Arg Gly Gly Thr Val Glu Met Leu Phe Gln
65 70 75 80

Asn Leu Ser Leu Ile Lys Lys Tyr Ile Asp Arg Gln Lys Glu Lys Cys
85 90 95

Gly Glu Glu Arg Arg Arg Thr Arg Gln Phe Leu Asp Tyr Leu Gln Glu

100 105 110

Phe Leu Gly Val Met Ser Thr Glu Trp Ala Met Glu Gly Leu Glu Val
115 120 125

Leu Ala Ile Glu Gly Arg
130

<210> 334
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> mouse C-IL-5-S construct

<400> 334

Leu Ala Cys Gly Gly Gly Gly Gly Met Glu Ile Pro Met Ser Thr Val
1 5 10 15

Val Lys Glu Thr Leu Thr Gln Leu Ser Ala His Arg Ala Leu Leu Thr
20 25 30

Ser Asn Glu Thr Met Arg Leu Pro Val Pro Thr His Lys Asn His Gln
35 40 45

Leu Cys Ile Gly Glu Ile Phe Gln Gly Leu Asp Ile Leu Lys Asn Gln
50 55 60

Thr Val Arg Gly Gly Thr Val Glu Met Leu Phe Gln Asn Leu Ser Leu
65 70 75 80

Ile Lys Lys Tyr Ile Asp Arg Gln Lys Glu Lys Cys Gly Glu Glu Arg
85 90 95

Arg Arg Thr Arg Gln Phe Leu Asp Tyr Leu Gln Glu Phe Leu Gly Val
100 105 110

Met Ser Thr Glu Trp Ala Met Glu Gly
115 120

<210> 335
<211> 138
<212> PRT
<213> Artificial Sequence

<220>
<223> human C-IL-5-E construct

<400> 335

Ala Leu Val Gly Cys Gly Gly Pro Lys Pro Ser Thr Pro Pro Gly Ser
1 5 10 15

Ser Gly Gly Ala Pro Ala Ser Ile Pro Thr Glu Ile Pro Thr Ser Ala
20 25 30

Leu Val Lys Glu Thr Leu Ala Leu Leu Ser Thr His Arg Thr Leu Leu
35 40 45

Ile Ala Asn Glu Thr Leu Arg Ile Pro Val Pro Val His Lys Asn His
50 55 60

Gln Leu Cys Thr Glu Glu Ile Phe Gln Gly Ile Gly Thr Leu Glu Ser
65 70 75 80

Gln Thr Val Gln Gly Gly Thr Val Glu Arg Leu Phe Lys Asn Leu Ser
85 90 95

Leu Ile Lys Lys Tyr Ile Asp Gly Gln Lys Lys Lys Cys Gly Glu Glu
100 105 110

Arg Arg Arg Val Asn Gln Phe Leu Asp Tyr Leu Gln Glu Phe Leu Gly
115 120 125

Val Met Asn Thr Glu Trp Ile Ile Glu Ser
130 135

<210> 336

<211> 136

<212> PRT

<213> Artificial Sequence

<220>

<223> human C-IL-5-F construct

<400> 336

Ala Asp Pro Gly Cys Gly Gly Gly Gly Gly Leu Ala Ile Pro Thr Glu
1 5 10 15

Ile Pro Thr Ser Ala Leu Val Lys Glu Thr Leu Ala Leu Leu Ser Thr
20 25 30

His Arg Thr Leu Leu Ile Ala Asn Glu Thr Leu Arg Ile Pro Val Pro
35 40 45

Val His Lys Asn His Gln Leu Cys Thr Glu Glu Ile Phe Gln Gly Ile

50

55

60

Gly Thr Leu Glu Ser Gln Thr Val Gln Gly Gly Thr Val Glu Arg Leu
65 70 75 80

Phe Lys Asn Leu Ser Leu Ile Lys Lys Tyr Ile Asp Gly Gln Lys Lys
85 90 95

Lys Cys Gly Glu Glu Arg Arg Arg Val Asn Gln Phe Leu Asp Tyr Leu
100 105 110

Gln Glu Phe Leu Gly Val Met Asn Thr Glu Trp Ile Ile Glu Ser Leu
115 120 125

Glu Val Leu Ala Ile Glu Gly Arg
130 135

<210> 337

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> human C-IL-5-S construct

<400> 337

Leu Ala Cys Gly Gly Gly Gly Gly Ile Pro Thr Glu Ile Pro Thr Ser
1 5 10 15

Ala Leu Val Lys Glu Thr Leu Ala Leu Leu Ser Thr His Arg Thr Leu
20 25 30

Leu Ile Ala Asn Glu Thr Leu Arg Ile Pro Val Pro Val His Lys Asn
35 40 45

His Gln Leu Cys Thr Glu Glu Ile Phe Gln Gly Ile Gly Thr Leu Glu
50 55 60

Ser Gln Thr Val Gln Gly Gly Thr Val Glu Arg Leu Phe Lys Asn Leu
65 70 75 80

Ser Leu Ile Lys Lys Tyr Ile Asp Gly Gln Lys Lys Lys Cys Gly Glu
85 90 95

Glu Arg Arg Arg Val Asn Gln Phe Leu Asp Tyr Leu Gln Glu Phe Leu
100 105 110

Gly Val Met Asn Thr Glu Trp Ile Ile Glu Ser
115 120

<210> 338
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> primer NheIL13-F

<400> 338

Cys Thr Ala Gly Cys Thr Ala Gly Cys Cys Gly Gly Gly Cys Cys Gly
1 5 10 15

Gly Thr Gly Cys Cys Ala Ala Gly Ala Thr Cys
20 25

<210> 339
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> primer XhoIL13-R

<400> 339
tttctcgagg aaggggccgt ggcgaa 26

<210> 340
<211> 55
<212> DNA
<213> Artificial Sequence

<220>
<223> primer Spelinker3-F1

<400> 340
ccccgccggg ttcttctggc ggtgctccgg ctagcatgga gattcccatg agcac 55

<210> 341
<211> 52
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer SpeNlinker3-F2

<400> 341
ttttactagt tggttgccgc ggcccgaac cgagcacccc gccgggttct tc 52

<210> 342
<211> 49
<212> DNA

<213> Artificial Sequence

<220>

<223> Primer IL5StopXho-R

<400> 342

ttttgcggcc gcgtttaaac tcgagttatt agccttccat tgcccactc

49

<210> 343

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer BamH1-FLK1-F

<400> 343

cgcggatcca ttcatcgcct ctgtc

25

<210> 344

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer Nhe1-FLK1-B

<400> 344

ctagctagct ttgtgtgaac tcggac

26

<210> 345

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> mVEGFR-2 (2-3) fragment

<400> 345

Pro Phe Ile Ala Ser Val Ser Asp Gln His Gly Ile Val Tyr Ile Thr
1 5 10 15

Glu Asn Lys Asn Lys Thr Val Val Ile Pro Cys Arg Gly Ser Ile Ser
20 25 30

Asn Leu Asn Val Ser Leu Cys Ala Arg Tyr Pro Glu Lys Arg Phe Val
35 40 45

Pro Asp Gly Asn Arg Ile Ser Trp Asp Ser Glu Ile Gly Phe Thr Leu
50 55 60

Pro Ser Tyr Met Ile Ser Tyr Ala Gly Met Val Phe Cys Glu Ala Lys
65 70 75 80

Ile Asn Asp Glu Thr Tyr Gln Ser Ile Met Tyr Ile Val Val Val Val
85 90 95

Gly Tyr Arg Ile Tyr Asp Val Ile Leu Ser Pro Pro His Glu Ile Glu
100 105 110

Leu Ser Ala Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu
115 120 125

Leu Asn Val Gly Leu Asp Phe Thr Trp His Ser Pro Pro Ser Lys Ser
130 135 140

His His Lys Lys Ile Val Asn Arg Asp Val Lys Pro Phe Pro Gly Thr
145 150 155 160

Val Ala Lys Met Phe Leu Ser Thr Leu Thr Ile Glu Ser Val Thr Lys
165 170 175

Ser Asp Gln Gly Glu Tyr Thr Cys Val Ala Ser Ser Gly Arg Met Ile
180 185 190

Lys Arg Asn Arg Thr Phe Val Arg Val His Thr Lys Pro
195 200 205

<210> 346

<211> 263

<212> PRT

<213> Artificial Sequence

<220>

<223> human C-LT_49-306 fragment

<400> 346

Leu Ala Cys Gly Gly Gln Asp Gln Gly Arg Arg Val Glu Lys Ile Ile
1 5 10 15

Gly Ser Gly Ala Gln Ala Gln Lys Arg Leu Asp Asp Ser Lys Pro Ser
20 25 30

Cys Ile Leu Pro Ser Pro Ser Ser Leu Ser Glu Thr Pro Asp Pro Arg
35 40 45

Leu His Pro Gln Arg Ser Asn Ala Ser Arg Asn Leu Ala Ser Thr Ser
50 55 60

Gln Gly Pro Val Ala Gln Ser Ser Arg Glu Ala Ser Ala Trp Met Thr

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<210> 347
<211> 186
<212> PRT
<213> Artificial Sequence

<220>
<223> human C-LT_126-306 fragment

<400> 347
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Leu Ala Cys Gly Gly Ser Pro Ala Ala Asp Ser Thr Pro Asp Pro Gly
1 5 10 15

Val Gln Gln Leu Pro Lys Gly Glu Pro Glu Thr Asp Leu Asn Pro Glu
20 25 30

Leu Pro Ala Ala His Leu Ile Gly Ala Trp Met Ser Gly Gln Gly Leu
35 40 45

Ser Trp Glu Ala Ser Gln Glu Glu Ala Phe Leu Arg Ser Gly Ala Gln
50 55 60

Phe Ser Pro Thr His Gly Leu Ala Leu Pro Gln Asp Gly Val Tyr Tyr
65 70 75 80

Leu Tyr Cys His Val Gly Tyr Arg Gly Arg Thr Pro Pro Ala Gly Arg
85 90 95

Ser Arg Ala Arg Ser Leu Thr Leu Arg Ser Ala Leu Tyr Arg Ala Gly
100 105 110

Gly Ala Tyr Gly Arg Gly Ser Pro Glu Leu Leu Leu Glu Gly Ala Glu
115 120 125

Thr Val Thr Pro Val Val Asp Pro Ile Gly Tyr Gly Ser Leu Trp Tyr
130 135 140

Thr Ser Val Gly Phe Gly Gly Leu Ala Gln Leu Arg Ser Gly Glu Arg
145 150 155 160

Val Tyr Val Asn Ile Ser His Pro Asp Met Val Asp Tyr Arg Arg Gly
165 170 175

Lys Thr Phe Phe Gly Ala Val Met Val Gly
180 185

<210> 348

<211> 117

<212> PRT

<213> Artificial Sequence

<220>

<223> Modified human prion protein fragment

<400> 348

Val Gly Gly Leu Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg Pro
1 5 10 15

Ile Ile His Phe Gly Ser Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn
20 25 30

Met His Arg Tyr Pro Asn Gln Val Tyr Tyr Arg Pro Met Asp Glu Tyr
35 40 45

Ser Asn Gln Asn Asn Phe Val His Asp Cys Val Asn Ile Thr Ile Lys
50 55 60

Gln His Thr Val Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr
65 70 75 80

Asp Val Lys Met Met Glu Arg Val Val Glu Gln Met Cys Ile Thr Gln
85 90 95

Tyr Glu Arg Glu Ser Gln Ala Tyr Tyr Gln Arg Gly Arg Leu Ala Gly
100 105 110

Gly Gly Gly Cys Gly
115

<210> 349

<211> 117

<212> PRT

<213> Artificial Sequence

<220>

<223> Modified bovine prion protein fragment

<400> 349

Val Gly Gly Leu Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg Pro
1 5 10 15

Leu Ile His Phe Gly Ser Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn
20 25 30

Met His Arg Tyr Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Gln Tyr
35 40 45

Ser Asn Gln Asn Asn Phe Val His Asp Cys Val Asn Ile Thr Val Lys
50 55 60

Glu His Thr Val Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr
65 70 75 80

Asp Ile Lys Met Met Glu Arg Val Val Glu Gln Met Cys Ile Thr Gln
85 90 95

Tyr Gln Arg Glu Ser Gln Ala Tyr Tyr Gln Arg Gly Arg Leu Ala Gly
100 105 110

Gly Gly Gly Cys Gly
115

<210> 350
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Modified sheep prion protein fragment

<400> 350

Val Gly Gly Leu Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg Pro
1 5 10 15

Leu Ile His Phe Gly Asn Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn
20 25 30

Met Tyr Arg Tyr Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Arg Tyr
35 40 45

Ser Asn Gln Asn Asn Phe Val His Asp Cys Val Asn Ile Thr Val Lys
50 55 60

Gln His Thr Val Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr
65 70 75 80

Asp Ile Lys Ile Met Glu Arg Val Val Glu Gln Met Cys Ile Thr Gln
85 90 95

Tyr Gln Arg Glu Ser Gln Ala Tyr Tyr Gln Arg Gly Arg Leu Ala Gly
100 105 110

Gly Gly Gly Cys Gly
115

<210> 351
<211> 26
<212> PRT
<213> Homo sapiens

<220>
<223> VEGFR-II derived peptide

<400> 351

Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile Asp Phe Asn Trp Glu
1 5 10 15

Tyr Pro Ser Ser Lys His Gln His Lys Lys
20 25

<210> 352

<211> 26

<212> PRT

<213> Artificial

<220>

<223> Murine VEGFR-II derived peptide

<400> 352

Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Leu Asp Phe Thr Trp His
1 5 10 15

Ser Pro Pro Ser Lys Ser His His Lys Lys
20 25

<210> 353

<211> 14

<212> PRT

<213> Artificial

<220>

<223> Angiotensinogen

<400> 353

Asp Arg Val Tyr Ile His Pro Phe His Leu Val Ile His Asn
1 5 10

<210> 354

<211> 10

<212> PRT

<213> Artificial

<220>

<223> Angiotensin I

<400> 354

Asp Arg Val Tyr Ile His Pro Phe His Leu
1 5 10

<210> 355

<211> 8

<212> PRT

<213> Artificial

<220>
<223> Angiotensin II

<400> 355

Asp Arg Val Tyr Ile His Pro Phe
1 5

<210> 356
<211> 26
<212> PRT
<213> Homo sapiens

<220>
<223> cprplong

<400> 356

Cys Ser Ala Met Ser Arg Pro Ile Ile His Phe Gly Ser Asp Tyr Glu
1 5 10 15

Asp Arg Tyr Tyr Arg Glu Asn Met His Arg
20 25

<210> 357
<211> 16
<212> PRT
<213> Homo sapiens

<220>
<223> cprpshort

<400> 357

Cys Gly Ser Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met His Arg
1 5 10 15

<210> 358
<211> 14
<212> PRT
<213> Artificial

<220>
<223> MuTNFa Peptide

<400> 358

Cys Gly Gly Val Glu Glu Gln Leu Glu Trp Leu Ser Gln Arg
1 5 10

<210> 359
<211> 22
<212> PRT
<213> Artificial

<220>

<223> 3'TNF II Peptide

<400> 359

Ser Ser Gln Asn Ser Ser Asp Lys Pro Val Ala His Val Val Ala Asn
1 5 10 15

His Gly Val Gly Gly Cys
20

<210> 360

<211> 20

<212> PRT

<213> Artificial

<220>

<223> 5'TNF II Peptide

<400> 360

Cys Ser Ser Gln Asn Ser Ser Asp Lys Pro Val Ala His Val Val Ala
1 5 10 15

Asn His Gly Val
20

<210> 361

<211> 22

<212> PRT

<213> Homo sapiens

<220>

<223> 4-22 epitope

<400> 361

Ser Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His Val Val Ala Asn
1 5 10 15

Pro Gln Ala Glu Gly Gln
20

<210> 362

<211> 11

<212> PRT

<213> Homo sapiens

<220>

<223> amino acid residues 22-32

<400> 362

Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala
1 5 10

<210> 363
<211> 74
<212> DNA
<213> Artificial

<220>
<223> pET22b(+)

<400> 363
gtttaacttt aagaaggaga tatacatatg gatccggcta gcgctcgagg gtttaaacgg 60
cggccgcatg cacc 74

<210> 364
<211> 26
<212> PRT
<213> Artificial

<220>
<223> cprplong prion peptide

<400> 364

Cys	Ser	Ala	Met	Ser	Arg	Pro	Met	Ile	His	Phe	Gly	Asn	Asp	Trp	Glu
1				5					10					15	

Asp	Arg	Tyr	Tyr	Arg	Glu	Asn	Met	Tyr	Arg
			20					25	

<210> 365
<211> 16
<212> PRT
<213> Artificial

<220>
<223> cprpshort prion peptide

<400> 365

Cys	Gly	Asn	Asp	Trp	Glu	Asp	Arg	Tyr	Tyr	Arg	Glu	Asn	Met	Tyr	Arg
1				5					10					15	

<210> 366
<211> 26
<212> PRT
<213> Artificial

<220>
<223> murine VEGFR-2 peptide

<400> 366

Cys	Thr	Ala	Arg	Thr	Glu	Leu	Asn	Val	Gly	Leu	Asp	Phe	Thr	Trp	His
1				5					10					15	

Ser Pro Pro Ser Lys Ser His His Lys Lys
20 25

<210> 367
<211> 18
<212> PRT
<213> Artificial

<220>

<223> A β 1-15

<400> 367

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Gly
1 5 10 15

Gly Cys

<210> 368
<211> 30
<212> PRT
<213> Artificial

<220>

<223> A β 1-27

<400> 368

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
1 5 10 15

Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Gly Gly Cys
20 25 30

<210> 369
<211> 17
<212> PRT
<213> Artificial

<220>

<223> A β 33-42

<400> 369

Cys Gly His Gly Asn Lys Ser Gly Leu Met Val Gly Gly Val Val Ile
1 5 10 15

Ala

<210> 370
<211> 37
<212> DNA
<213> Artificial

<220>

<223> inverse primer

<400> 370
ggtaacatcg gtcgagatgg aaaacaaact ctgggtcc 37

<210> 371
<211> 37
<212> DNA
<213> Artificial

<220>
<223> inverse primer

<400> 371
ggaccagagt ttgttttcca tctcgaccga tgttacc 37

<210> 372
<211> 22
<212> DNA
<213> Artificial

<220>
<223> upstream primer

<400> 372
agctcgcccg gggatcctct ag 22

<210> 373
<211> 40
<212> DNA
<213> Artificial

<220>
<223> downstream primer

<400> 373
cgatgcattt catccttagt tatcaatacg ctgggttcag 40

<210> 374
<211> 36
<212> DNA
<213> Artificial

<220>
<223> inverse primer

<400> 374
ggcaaaatta gagactgtta ctttaggtaa gatcgg 36

<210> 375
<211> 36
<212> DNA
<213> Artificial

<220>
<223> inverse primer

<400> 375
ccgatcttac ctaaagtaac agtctctaataa tttgcc 36

<210> 376
<211> 33
<212> DNA
<213> Artificial

<220>
<223> Upstream primer

<400> 376
ggccatggca cgactcgaga ctggtacttt agg 33

<210> 377
<211> 19
<212> DNA
<213> Artificial

<220>
<223> Downstream primer

<400> 377
gatttaggtg acactatag 19

<210> 378
<211> 37
<212> DNA
<213> Artificial

<220>
<223> Inverse primer

<400> 378
gatggacgtc aaactctggt cctcaatccg cgtgggg 37

<210> 379
<211> 37
<212> DNA
<213> Artificial

<220>
<223> Inverse primer

<400> 379
ccccacgcgg attgaggacc agagtttgac gtccatc 37

<210> 380
<211> 11
<212> PRT
<213> Artificial

<220>
<223> Angio I

<400> 380

Cys Gly Gly Asp Arg Val Tyr Ile His Pro Phe
1 5 10

<210> 381

<211> 13

<212> PRT

<213> Artificial

<220>

<223> Angio II

<400> 381

Cys Gly Gly Asp Arg Val Tyr Ile His Pro Phe His Leu
1 5 10

<210> 382

<211> 13

<212> PRT

<213> Artificial

<220>

<223> Angio III

<400> 382

Asp Arg Val Tyr Ile His Pro Phe His Leu Gly Gly Cys
1 5 10

<210> 383

<211> 11

<212> PRT

<213> Artificial

<220>

<223> Angio IV

<400> 383

Cys Asp Arg Val Tyr Ile His Pro Phe His Leu
1 5 10

<210> 384

<211> 23

<212> PRT

<213> Artificial

<220>

<223> Der p I p52; aa 52-72

<400> 384

Cys Gly Asn Gln Ser Leu Asp Leu Ala Glu Gln Glu Leu Val Asp Cys
1 5 10 15

Ala Ser Gln His Gly Cys His
20

<210> 385
<211> 21
<212> PRT
<213> Artificial

<220>
<223> Der p 1 p117; aa 117-137

<400> 385

Cys Gln Ile Tyr Pro Pro Asn Ala Asn Lys Ile Arg Glu Ala Leu Ala
1 5 10 15

Gln Thr His Ser Ala
20

<210> 386
<211> 38
<212> DNA
<213> Artificial

<220>
<223> HBcAgwtHindIIII

<400> 386
cgcggtcccaa gcttctaaca ttgagattcc cgagattg

38

<210> 387
<211> 14
<212> PRT
<213> Artificial

<220>
<223> muTNFa peptide

<400> 387

Cys Gly Gly Val Glu Glu Gln Leu Glu Trp Leu Ser Gln Arg
1 5 10

<210> 388
<211> 54
<212> DNA
<213> Artificial

<220>
<223> Primer CA2F

<400> 388
cggctcgagc atcaccatca ccatacagggt gaagttaaac tgcagctgga gtcg

54

<210> 389
<211> 52
<212> DNA
<213> Artificial

<220>
<223> Primer CA1R

<400> 389
catgccatgg ttaaccacag gtgtggggtt tatcacaaga tttgggcaca ac 52

<210> 390
<211> 61
<212> DNA
<213> Artificial

<220>
<223> Primer CB1R

<400> 390
catgccatgg ttaaccacac ggcggagagg tgtggggttt atcacaagat ttggggtcaa 60
c 61

<210> 391
<211> 58
<212> DNA
<213> Artificial

<220>
<223> Primer CC1R

<400> 391
ccagaagaac ccggcggggt agacgggttc gggctagcac aagatttggg ctcaactc 58

<210> 392
<211> 60
<212> DNA
<213> Artificial

<220>
<223> Primer CC1F

<400> 392
cgccgggttc ttctggtggt gtcggggtg gttgcggtta accatggaga aaataaagag 60

<210> 393
<211> 18
<212> DNA
<213> Artificial

<220>
<223> Primer CCR2

<400> 393
ctcccggtga gaagtcac 18

<210> 394
<211> 219
<212> PRT
<213> Artificial

<220>
<223> Light chains of pCA2, pCB2 and pCC2

<400> 394

Asp Ile Glu Leu Val Val Thr Gln Pro Ala Ser Val Ser Gly Ser Pro
1 5 10 15

Gly Gln Ser Ile Thr Ile Ser Cys Thr Gly Thr Arg Ser Asp Val Gly
20 25 30

Gly Tyr Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro
35 40 45

Lys Leu Met Ile Tyr Asp Val Ser Asn Arg Pro Ser Gly Val Ser Asn
50 55 60

Arg Phe Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser
65 70 75 80

Gly Leu Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Tyr Thr
85 90 95

Ser Ser Ser Thr Leu Gly Val Phe Gly Gly Gly Thr Lys Leu Thr Val
100 105 110

Leu Gly Gln Pro Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser
115 120 125

Ser Glu Glu Leu Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser
130 135 140

Asp Phe Tyr Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser
145 150 155 160

Pro Val Lys Ala Gly Val Glu Thr Thr Thr Pro Ser Lys Gln Ser Asn
165 170 175

Asn Lys Tyr Ala Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp
180 185 190

Lys Ser His Lys Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr
195 200 205

Val Glu Lys Thr Val Ala Pro Thr Glu Cys Ser
210 215

<210> 395
<211> 251
<212> PRT
<213> Artificial

<220>
<223> Heavy chain of pCA2

<400> 395

Glu Val Lys Leu Gln Leu Glu His His His His His His Gly Glu Val
1 5 10 15

Lys Leu Gln Leu Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr
20 25 30

Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly Gly
35 40 45

Tyr Tyr Trp Thr Trp Ile Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp
50 55 60

Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu
65 70 75 80

Lys Ser Arg Val Thr Met Ser Val Asp Thr Ser Lys Asn Gln Phe Ser
85 90 95

Leu Arg Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
100 105 110

Ala Arg Glu Arg Gly Glu Thr Gly Leu Tyr Tyr Pro Tyr Tyr Tyr Ile
115 120 125

Asp Val Trp Gly Thr Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr
130 135 140

Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser
145 150 155 160

Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu
165 170 175

Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His

180	185	190
Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser		
195	200	205
Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys		
210	215	220
Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu		
225	230	235 240
Pro Lys Ser Cys Asp Lys Thr His Thr Cys Gly		
	245	250
<210> 396		
<211> 254		
<212> PRT		
<213> Artificial		
<220>		
<223> Heavy chain of pCB2		
<400> 396		
Glu Val Lys Leu Gln Leu Glu His His His His His His Gly Glu Val		
1	5	10 15
Lys Leu Gln Leu Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr		
	20	25 30
Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly Gly		
	35	40 45
Tyr Tyr Trp Thr Trp Ile Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp		
	50	55 60
Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu		
65	70	75 80
Lys Ser Arg Val Thr Met Ser Val Asp Thr Ser Lys Asn Gln Phe Ser		
	85	90 95
Leu Arg Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys		
	100	105 110
Ala Arg Glu Arg Gly Glu Thr Gly Leu Tyr Tyr Pro Tyr Tyr Tyr Ile		
	115	120 125

Asp Val Trp Gly Thr Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr
130 135 140

Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser
145 150 155 160

Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu
165 170 175

Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His
180 185 190

Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
195 200 205

Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys
210 215 220

Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu
225 230 235 240

Pro Lys Ser Cys Asp Lys Thr His Thr Ser Pro Pro Cys Gly
245 250

<210> 397
<211> 263
<212> PRT
<213> Artificial

<220>
<223> Heavy chain of pCC2

<400> 397

Glu Val Lys Leu Gln Leu Glu His His His His His His Gly Glu Val
1 5 10 15

Lys Leu Gln Leu Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr
20 25 30

Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly Gly
35 40 45

Tyr Tyr Trp Thr Trp Ile Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp
50 55 60

Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu
65 70 75 80

Lys Ser Arg Val Thr Met Ser Val Asp Thr Ser Lys Asn Gln Phe Ser
85 90 95

Leu Arg Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
100 105 110

Ala Arg Glu Arg Gly Glu Thr Gly Leu Tyr Tyr Pro Tyr Tyr Tyr Ile
115 120 125

Asp Val Trp Gly Thr Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr
130 135 140

Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser
145 150 155 160

Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu
165 170 175

Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His
180 185 190

Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
195 200 205

Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys
210 215 220

Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu
225 230 235 240

Pro Lys Ser Cys Ala Ser Pro Lys Pro Ser Thr Pro Pro Gly Ser Ser
245 250 255

Gly Gly Ala Pro Gly Gly Cys
260

<210> 398
<211> 23
<212> PRT
<213> Artificial

<220>
<223> TNF- α attachment

<400> 398

Cys Ser Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His Val Val Ala
1 5 10 15

Asn Pro Gln Ala Glu Gly Gln
20

<210> 399
<211> 25
<212> PRT
<213> Artificial

<220>
<223> TNF- α attachment

<400> 399

Ser Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His Val Val Ala Asn
1 5 10 15

Pro Gln Ala Glu Gly Gln Gly Gly Cys
20 25

<210> 400
<211> 14
<212> PRT
<213> Artificial

<220>
<223> TNF- α attachment

<400> 400

Cys Gly Gly Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala
1 5 10

<210> 401
<211> 26
<212> PRT
<213> Bovine

<220>
<223> cprplong

<400> 401

Cys Ser Ala Met Ser Arg Pro Leu Ile His Phe Gly Asn Asp Tyr Glu
1 5 10 15

Asp Arg Tyr Tyr Arg Glu Asn Met His Arg
20 25

<210> 402
<211> 16
<212> PRT
<213> Bovine

<220>

<223> cprpshort

<400> 402

Cys	Gly	Asn	Asp	Tyr	Glu	Asp	Arg	Tyr	Tyr	Arg	Glu	Asn	Met	His	Arg
1				5				10						15	

<210> 403

<211> 26

<212> PRT

<213> Sheep

<220>

<223> cprplong

<400> 403

Cys	Ser	Ala	Met	Ser	Arg	Pro	Leu	Ile	His	Phe	Gly	Asn	Asp	Tyr	Glu
1				5				10						15	

Asp	Arg	Tyr	Tyr	Arg	Glu	Asn	Met	Tyr	Arg
			20					25	

<210> 404

<211> 16

<212> PRT

<213> Sheep

<220>

<223> cprpshort

<400> 404

Cys	Gly	Asn	Asp	Tyr	Glu	Asp	Arg	Tyr	Tyr	Arg	Glu	Asn	Met	Tyr	Arg
1				5				10						15	

<210> 405

<211> 7

<212> PRT

<213> Artificial

<220>

<223> ABeta N-terminus fused

<400> 405

Cys	Gly	His	Gly	Asn	Lys	Ser
1				5		

<210> 406

<211> 5

<212> PRT

<213> Artificial

<220>

<223> HBcAg1-183Lys construct

<400> 406

Gly Gly Lys Gly Gly
1 5

<210> 407

<211> 5

<212> PRT

<213> Artificial

<220>

<223> Glycine serine linkers

<400> 407

Gly Gly Gly Gly Ser
1 5

<210> 408

<211> 10

<212> PRT

<213> Artificial

<220>

<223> N-terminal gamma 1

<400> 408

Cys Gly Asp Lys Thr His Thr Ser Pro Pro
1 5 10

<210> 409

<211> 10

<212> PRT

<213> Artificial

<220>

<223> C-terminal gamma 1

<400> 409

Asp Lys Thr His Thr Ser Pro Pro Cys Gly
1 5 10

<210> 410

<211> 17

<212> PRT

<213> Artificial

<220>

<223> N-terminal gamma 3

<400> 410

Cys Gly Gly Pro Lys Pro Ser Thr Pro Pro Gly Ser Ser Gly Gly Ala
1 5 10 15

Pro

<210> 411
<211> 18
<212> PRT
<213> Artificial

<220>
<223> C-terminal gamma 3

<400> 411

Pro	Lys	Pro	Ser	Thr	Pro	Pro	Gly	Ser	Ser	Gly	Gly	Ala	Pro	Gly	Gly
1				5				10						15	

Cys Gly

<210> 412
<211> 6
<212> PRT
<213> Artificial

<220>
<223> N-terminal glycine linker

<400> 412

Gly	Cys	Gly	Gly	Gly	Gly
1				5	

<210> 413
<211> 6
<212> PRT
<213> Artificial

<220>
<223> C-terminal glycine linker

<400> 413

Gly	Gly	Gly	Gly	Cys	Gly
1				5	

<210> 414
<211> 4
<212> PRT
<213> Artificial

<220>
<223> C-terminal peptide linker

<400> 414

Gly Gly Cys Gly
1

<210> 415
<211> 5
<212> PRT
<213> Artificial

<220>
<223> Lymphotoxin-Beta linker

<400> 415

Leu Ala Cys Gly Gly
1 5

<210> 416
<211> 4
<212> PRT
<213> Artificial

<220>
<223> Amino acid linker

<400> 416

Ala Cys Gly Gly
1

<210> 417
<211> 8
<212> PRT
<213> Artificial

<220>
<223> N-terminal IL-13

<400> 417

Leu Ala Cys Gly Gly Gly Gly Gly
1 5

<210> 418
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Amino acid linker

<400> 418

Ala Cys Gly Gly Gly Gly Gly
1 5

<210> 419
<211> 12
<212> PRT
<213> Artificial

<220>
<223> N-terminal IL-5

<400> 419

Ala Asp Pro Gly Cys Gly Gly Gly Gly Gly Leu Ala
1 5 10

<210> 420
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Amino acid linker

<400> 420

Gly Cys Gly Gly Gly Gly Gly
1 5

<210> 421
<211> 31
<212> PRT
<213> Artificial

<220>
<223> Amidated ABeta 1-27

<220>
<221> MOD_RES
<222> (31)..(31)
<223> AMIDATION

<400> 421

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
1 5 10 15

Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Gly Gly Cys Xaa
20 25 30

<210> 422
<211> 17
<212> PRT
<213> Artificial

<220>
<223> Hydrogenated ABeta 33-42

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa=Hydrogen

<400> 422

Xaa Cys Gly His Gly Asn Lys Ser Gly Leu Met Val Gly Gly Val Val
1 5 10 15

Ile

<210> 423
<211> 19
<212> PRT
<213> Artificial

<220>
<223> Amidated ABeta 1-15

<220>
<221> MOD_RES
<222> (19)..(19)
<223> AMIDATION

<400> 423

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Gly
1 5 10 15

Gly Cys Xaa

<210> 424
<211> 9
<212> PRT
<213> Artificial

<220>
<223> Amino acid linker

<400> 424

Gly Cys Gly Ser Gly Gly Gly Gly Ser
1 5

<210> 425
<211> 10
<212> PRT
<213> Artificial

<220>
<223> Amino acid linker

<400> 425

Gly Ser Gly Gly Gly Gly Ser Gly Cys Gly
1 5 10

<210> 426

<211> 745

<212> DNA

<213> Artificial

<220>

<223> pCep-Xa-Fc* construct

<400> 426

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ttcctcttcc ccccaaaacc caaggacacc ctcatgatct cccggacccc tgaggtcaca      180
tgcgtaggtg tggacgtgag ccacgaagac cctgaggtca agttcaactg gtacgtggac      240
ggcgtggagg tgcataatgc caagacaaag ccgcgggagg agcagtacaa cagcacgtac      300
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tgcaaggctc ccaacaaagc cctcccagcc tccatcgaga aaaccatctc caaagccaaa      420
gggcagcccc gagaaccaca ggtgtacacc ctgcccccat cccgggatga gctgaccaag      480
aaccagggtc gcctgacctg cctggtcaaa ggcttctatc ccagcgacat cgccgtggag      540
tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccggt gttggactcc      600
gacggctcct tcttctctca cagcaagctc accgtggaca agagcagggtg gcagcagggg      660
aacgtcttct catgtcccggt gatgcatgag gctctgcaca accactacac gcagaagagc      720
ctctccctgt ctccgggtaa atgac      745
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<210> 427

<211> 96

<212> DNA

<213> Artificial

<220>

<223> pCep-EK-Fc* construct

<400> 427

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aagcttactc acacatgccc accgtgccca gcacct      96
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<210> 428

<211> 144

<212> DNA

<213> Artificial

<220>

<223> pCep-SP-EK-Fc* construct

<400> 428

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gacgcggatc cagcagctgg gctcgagggt ctagcgggag ggggtggatg tggggacgat 120
gacgacaagc ttactcacac atgc 144

<210> 429

<211> 399

<212> DNA

<213> Mouse

<220>

<223> Resistin protein Res-C-Xa

<400> 429

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ctgctgggct ccagcatgcc actgtgtccc atcgatgaag ccatcgacaa gaagatcaaa 120
caagacttca actccctggt tccaaatgca ataaagaaca ttggcttaaa ttgctggaca 180
gtctcctcca gaggggaagtt ggctcctgc ccagaaggca cagcagtctt gagctgctcc 240
tgtggctctg cctgtggctc gtgggacatt cgtgaagaaa aagtgtgtca ctgccagtgt 300
gcaaggatag actggacagc agcccgtgc tgtaagctgc aggtcgcttc ctctctagcg 360
ggaggggggtg gatgtgggat cgaaggctgc aagcttact 399

<210> 430

<211> 399

<212> DNA

<213> Mouse

<220>

<223> Resistin protein Res-C-EK

<400> 430

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ctgctgggct ccagcatgcc actgtgtccc atcgatgaag ccatcgacaa gaagatcaaa 120
caagacttca actccctggt tccaaatgca ataaagaaca ttggcttaaa ttgctggaca 180
gtctcctcca gaggggaagtt ggctcctgc caagaaggca cagcagtctt gagctgctcc 240
tgtggctctg cctctggctc gtgggacatt cgtgaagaaa aagtgtgtca ctgccagtgt 300
gcaaggatag actggacagc agcccgtgc tgtaagctgc aggtcgcttc ctctctagcg 360
ggaggggggtg gatgtgggga cgatgacgac aagcttact 399